SEQUENCE LISTING

<110> Wong et al.

<120> CLONING OF RHADINOVIRUS GENOME AND METHODS FOR ITS USE

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<141> 1998-11-06

<140> 60/109,409
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128701 CCGACCGAGT TTCCAGAGGT GCATAATTAA CCAGAGGCGC CAGAAGATGC CAGATAACGC
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129001 AGGGCGTATA GGGGTTGTTA GGTATGCGGT GGGGAGCCGT CCATGTTACA TGGACTTCAA
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129121 ACAGTAATCA CTTGACAGAT CCCCTTCTAA CTCATAACAA CTGTTTCGGG GTGTTGAGGT
129181 TACAGGTAAG GGTGGGAGGG GAATGTTAGG TGGCGAACCA AAGCATAACG TCGCGGGGCG
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129301 CTCCGAAAGT GTGTCCTGTT GGATGTTTTG TGGATTAGGT AAAACAGAAA GTTGTGGAGA
129361 AAGTAACCTT ATAGATGACC TCCTGCTGGC GCGTGGCTGG GTGACAGCTG GTTGTTGATG
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129481 CTCAACACTA ACTTCCTCCC GTTCAGACCG TGAGCGGTTT CGTCTGTAGC GTCTTGTGGA
129541 GGGGGTTGCC TGAACCCTTG TTGGTGTAAA CAATCCAGGT AACCGGTAAA TGCACGCGGT
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129781 ATGGAGAGTA AATTTGCCCC GCTGAGAATG CCTGGAAATA AGAGGCGCGT ATTTTACATG
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129901 TAGAGTGCTG CACGCGGTGT TGGTTGCAGG AAGTACATCC TAATTTTAAC TCTAAAAGGG
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130201 GGTTGTTCTT GAATTATATG TACTCCTAGT TCTGAGGCAA CTGTATGTAG TGCAAGCACG
130261 CTGCCTTGCA ACATAACCAA TAGGCATGTT CCATGATTCG ATATTCGCCA TGCCATTTTA
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130861 AAGGCCAATA TCATAGTAAA ACAAACTTTA AACAGGTAAA AAGTTACGTC TTACCTATGT
130921 AAAATTGAGA TACGCATGCA ATAGCACTAC ACGTCTGTAC CAAAATACTT GCGTTGTCCA
130981 AGGCCAATGC CGATAGTAAA ACACAACATG CTGCAAACAA GTACACAAAA TATAAGTTTA
131041 ATTTGCTAAT TAAAATTAAT ATTTCAAATG TATTATAAAA TCATACCTGT AATCCATGGG
131101 AAAAAAATTG AAGGCAACGG AGTTAATTGA CCTGCTCTGC TTCGATTACA ATACAAACTA
131161 ATAGTTTTCC ATAAAAGAGA ACAACACGTA ACAAATGAAC AAATAATTGT GACTGCTTGA
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131341 TCAAAACTGT ATTATCAAGT TAAGGGGGAG TTTGAGCTTT AAAAGGTTGG TTACATCGTT
131401 TCCAGGCAAA CCTCACACTG AGTCACACAA AGGTTTCTGT GTGCCCCTGT ACGGGAATCT
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131701 TTGTTTGGTA CGTAAACTAA AAATATGTAT GGTAAGGGCT AGGGGTAAGG GCAAGGGGTA
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131821 GGGTAAGGGC AAGGGGTAAG GGCAAGGGGT AAGGGCAAGG GGTAAGGGCA AGGGGTAAGG
131881 GCTAGGGGTA AGGGCTAGGG GTAAGGGCTA GGGGTAAGGG CTAGGGTGAG CTAGGGTGAG
131941 CTAGGGTTAT AGTTATAGTG TAAAATAATA GGCCTACGAT AAAATGTCAA CATATATTTT
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132001 TTAATTTGTG TTTCATTAAC AGCCATGGTG TATTAGAGTA AAGGTTAACG CTTCAATACA
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132121 GGCACATGTA ACTTCACGCT ACCCTAAACG TACAATACTG GGACTAGAAC CCAGAGGTAG
132181 TTAGAATATA CGGTAGTTAC AGAACTTTGC AGTTCCCTTA GGCCAGCAGG GCTCTGCGGT
132241 TAATTAAACA AAGTTTAAAG ATAACTGAAA CTTTAGGAAG TGCGTATGGG TGCAATGTGT
132301 TCCAAATAGG GCAAGGGTTA CATAAACTGT TGCCTAGCGG CCGGGCCCGG AGGCGCCCGG
132361 CCGGCGCCGC CGCCGGGCCG CGGCCGCCAT CTTGCGCCCG GGGCGAGGGT CCCCCGCGCG
132421 CCCCCCGGGC CCGCGCGCCG GGCGCCGCCG GCCTCCCCCG GCTCCCGGCC CTCCGCCCCG
132481 CCGGCCCGGG CCCGCGGCCG CCGCCCCCGG CCGCCCCGCG CCGCGCGCCG GGCCGCTTTC
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132601 GGCCCGGCCG ACTCCCGGGA GCGCCCCGGT CCGGCCGAGC CCGGCGGCGC CGCGCCCCGA
132661 CGCCCCCCGG GCCCGGGGCC CCACAAGCCG CGGCGCGCGG CTCCCGATGC CGGGCGGCCG
132721 CCGCCCGGCA TGGCGGTCCT CCGCCGGCCT CCCCTCCCCC ACGCCGCCCC GAAAGGTGGT
132781 CTCCGCGCCG CCGGGAGGGG GGCCGGGGCC CGGGGCGCCT CGGCGGGGCC CGGCGCGGGG
132841 CGCGACCGAG GGCCCCGGGA GAACGGGGGA TCGGGAAAAC GCGAGGGGAG CGGGGGACAG
132901 GGGACGGCGT GTGCGTGCTT GTGAGACACC GGGTACGGCT GCCTGCCTGC TCGCTGGCCT
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133621 CTGCCGGCCA GCTGCGTGCG AGGGCGTCCG AGGGCCAGAC GAGGACACGG GACCCGGGCC
133681 TCTCCCCCGC CCGGACCGCC GGGCACCCGG CCCAGATCT
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SEQ ID NO 2
CDS nucleotides 1353-2624
SEQ ID NO 3

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MFVLVLFMLLQPVSVELLPAKLTSVPTWCPPHPGDTYLLTCRGTSTARDQRSTQWFRNNTLMRGSNFYGRLVSVTPNATI
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AISLIMCWLFTIRCNENSESSTNSYASQTSYIQPSHNQRSNTNECSRHTYRNAHQEESIEELPNQHTSETDSCCQLVLLE
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SEQ ID NO 4
CDS complement(2692..3258)
/note="dihydrofolate reductase; ORF 2; similar to Kaposi's sarcoma-associated herpesvirus ORF 2"
SEQ ID NO 5

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REPPHGAHFLARTLDDAFNFYRQYKLKEQLNTVWVIGGKSVYESVLNYKCPLKLYITRIMESFDCDVFFPSINFTEYTML
SEIPGKDTNFEENGIKYKFQVYEKNFNK
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SEQ ID NO 6 CDS 3676..5613
/note="complement binding protein; ORF 4; similar to Kaposi's sarcoma-associated herpesvirus ORF 4"
SEQ ID NO 7 /translation="MTFKLFPLFLLHAIMYVHCDENCKPPHFTEYRVKSNTEKDLYSV
GETAELICRPGYVTNTKIITTECLQNGTWSTPNFPCDRKRCPTPADLLNGAVHIHGGD
NALKFGSNISYECNEGYDLIGSNVRFCILQDTENVNWDSNEPVCEIQKCIKPPAVEHG

DYLPNQDVYNYGDAITFKCSLSYTLVGSTTLVCTSNKKWSNSFPTCLMLVCESPQIDN
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DKEKYSVGASVELICRPGFTKMQSTVSVECLSNGTWTAPNAKCHRKKCPTPQELLNGE
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PPPQITNGKYHPVKDFYQYLDTVTFSCNRDFSLVGDEMTTCISNTWNKPFPRCEQITC
SAPNIAHGKLLTGSSSVYKYGQSVTIGCETGFTLIGSEISTCKDSSWDPPLPTCVPAV
SMPSDTPKPETKKPNTPTPEAPKPNTPNVGTHTPFKPPPQNPPIAPPMSKWKRHVVLV
LFASVASLLFVLAALYCCFLK"

SEQ ID NO 8 CDS 6045..9443

/note="ssDNA binding protein; ORF 6; similar to Kaposi's sarcoma-associated herpesvirus ORF 6"

SEQ ID NO 9 /translation="MASKGNAGQPLEDNQGSRAPIGACGYVYAYSKQDFPFAEASILG
NRPSGSGVFSLPILYGLTVEHEFPLTVKAAYKKVDTTTLAVKVTCFHREVIVFHNASL
FRPVFDGTGLNELCEEARALFGYTQFIEPGPPHSIWNPLECPQLPDKDEMFLGVVVTE
GFKERLWRGCLVPAVFQTQQVQIAGRQAFKVPLYDEDLFAPHGHRMPRFYHKDVSAYL
YDSLFTSIAQALRLKDVTAVIHATEKQFMQDHYKIAKIVQAKQFSTTLPKTTDGSSHM
IVDSVVAELALSYGCMFLECPQDACELLNYDSWPIFDGCDSPEARVNALERWSAEQAV
HVAGQLFAANSVLYLTKVQKQAPRGQKGDVNVYNSFFLQHGLGFLNEATIKENGSEAF
KGVPSNALDGSSFTPYHLAYAASFSPHLLAKLCYYMQFLQHHKSSTNQAFNMVHYVGT
AANSEMCTLCHGNTPATCLNTLFYRLKDRFPAVTTPQRRDPYVVTGTAGTFNDLEILG
NFASFRDREEDGNPADEHPKYTYWQLCQTVTEKLSAIGITEDHDNHVNLITNIQSFLR
VFKGIDSIVDGEVMKFVNSMIKNNFNFREHVKSVHHILQFCCNVYWQAPCAVFLNLYY
KSLLWIIQDICLPYCMIYEQDNPAMGILPSEWLKMHFQTLWTNFKAACLDRGVLTGCE
LKIVHRDMFCDFFDTDAGSNGLMAPFKMQVRIARAMMVVPKSIKIKNRIIFSNTAGSE
AVQSGFVKPTGTRDTYVVAGPYMKFLNSLHRALFPDTKTAALYLWHKISQTNKTPVLK
DVPDDELAELVSYVKTNSLAFEETNVLDVVPDSLMSYARIKLNGAILRACGQIQFYAT
TLHCLTPVLQTIDAEEYPHVLGSAAIATPVAYLAEIRGRTALTVQTTARQPVAATGRL
RPVITVPMVVNKYTGVNGNNNVFHCGNLGYFAGRGVDRNLWPESSPFKKTGVSAMLRK
RHVMMTPIIDRLIKRAAGQTISTFEAESVKRSVQALLEDKDNPNLLKSVILELIRHLG
KGCQDLSSEDVQYYLGDYCMLTDEVLFTLDNIAQSGVPWTIEDAGALIEDRQDADDLQ
FVDSDDIATASCQPPEEQLPTPSAGALLAGKKRKINALLSDLDL"

SEQ ID NO 10 CDS 9468..11528

/note="transport protein; ORF 7; similar to Kaposi's sarcoma-associated herpesvirus ORF 7"

SEQ ID NO 11 /translation="MARELAALYAQLSALAVDLSLVIFADPRSIDGARILKTKTQIEN
LNRDLLPLLREQNSVETSSLSLEVEHLAKNIEDKLGELERSLRQRYSSREHFETLHLR
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LSTLRGISPIPHPDLYVTSVPCVQCLREIELVPNQGSSLLAVLADRHCDHLCKKVRAE
PIHGLFETELSQLGLKVTKRSDATQHGVRSSADQLRESSLAAIQDHNIFKRVSASIME
LSNLIYWNAGQTGLQTGTENECSQMARLLTHEADMHEHRALITPKLSATHFYDCFRPD
PIESLFCGGLFNSIDDTINALSRDCSVTFFQQANYTNVMRKQNELFTRLNSILRQGSA
GSQKPATPSEPRTTTVAATAASDVIKDAQYRKEQYMKKVARDGFKKLTECLQTQSAVL
ANALCMRVWGGVAYGEASELVNHFLLRRRFVALPWEARCRSDQILFENSKYIKNSLYS
QRLSREHVEIITLQFYGLITGPLTRQSDLFPGPANVALAQCFEAAGMLPHHKMLVSEM
IWPQIQPKDWIDQTFNRFYQLPEGDLNAVQKSAWCFIRELVLSVALYNRTWEKTLRIF
SLAREKLSISNLDVKGLTSGLYLTYEQDAPLVLISQNTGWIFKDLYALLYHHLQLSDG
HDDN"

SEQ ID NO 12 CDS 11515..14004

/note="glycoprotein B; ORF 8; similar to Kaposi's sarcoma-associated herpesvirus ORF 8"

SEQ ID NO 13 /translation="MMITNRTRRLLRAWVVIIAIGTAVGENVTTPKGATTTAKPTPGP
STPTPPENPPRAEAFKFRVCSASATGELFRFNLEKTCPGTEDKTHQEGILMVFKKNIV

PHIFKVRRYRKVATSVTVYRGWTETAVTGKQEVIRPVPQYEINHMDTTYQCFSSMRVN
VNGIVNTYTDRDFTNQTVFLQPVEGLTDNIQRYFSQPVLYTTPGWFPGIYRVRTTVNC
EIVDMIARSAEPYSYFVTALGDTVEVSPFCHNDSTCSVAEKTENGLGARVLTNYTIVD
FATRQPTTETRVFADSGEYTVSWKAEDPKSAVCALTLWKTFPRAIQTTHEASYHFVAN
DVTATFTSPLSQVTNFTGTYPCLNDVIQKTLNATIKKLSDTHATNGSEQYYETEGGLF
LLWQPLTPLSLADEMRELNGTTPAPPTTTSTANRVRRSVGTNEQATDDLAAPQLQFAY
DKLRASINKVLEELSRAWCREQVRDTYMWYELSKINPTSVMTAIYGRPVSAKFVGDAI
SVTDCVAVDQASVSIHKSLRTSTPGICYSRPPVTFRFLNSTTLFKGQLGPRNEIILTD
NQVEACKETCEHYFIASNVTYYYKDYVFVKKINTSEISTLGTFIALNLSFIENIDFRV
IELYSRAEKKLSGSVFDIETMFREYNYYTQRLAGLREDLDNTIDLNRDRLARDLSEIV
ADLGDVGRTVVNVASSVITLFGSIVSGFINFIKSPFGGMLMILVIVAVVLIVFALNRR
TNAIAQAPIRMIYPDIDKMQPSGGKVDQEQIKNILAGMHQLQQEERRRLDEQQRSAPS
LFRRASDGLKRRFRGYKPLENEEAQEYEMSK"

SEQ ID NO 14 CDS 14122..17166
/note="DNA polymerase; ORF 9; similar to Kaposi's sarcoma-associated herpesvirus ORF 9"

SEQ ID NO 15 /translation="MDFFNPYLGPRGPRPHSHRGTDAPAPAGAGAVQPPPDVCRLIPA
CLRTPGAGGMIPVTIPFPPTYFENGARGDVLLANERSMWTARDRKPVAPDPQDQSITF
HAYDVVETTYAADRCAEVPSRFQTDIIPSGTVLKLLGRTEDGTSVCVNVFRQQVYFYA
KVPAGINVTHILQQALKNTAGRAACGFSTRRVNKRILKTYDVAEHPVTEITLSSGSML
STLSDRLVACGCEVFESNVDAVRRFVLDHGFTTFGWYSCARATPRLAARDARTALEFD
CSWEDLSVQADRSDWPPYRIVAFDIECTGEAGFPCATRDGDAVIQISCVFYTTREGAP
NPPNILFSVGTCDPIPDTDVLEFPSEYDMLVSFFAMIRDFEVDFLTGYNISNFDLPYL
ITRASQVYNLRLNEYTKIKTGSIFEVHEPRGGGGGFMRSVSKIKIAGIVPIDMYQVCR
EKLSLSDYKLDTVARQCLGGKKEDVSYKDIPPLFRSGPGGRAKVGSYCVMDSVLVMDL
LKMFMIHVEISEIAKLAKIQARRVLTDGQQLRVFSCLLEAAARENFILPVPTPEGQGG
YQGATVINPIPGFYDEPVLVVDFASLYPSIIQAHNLCYSTMIHGRDLHLHPNLTPDDY
ETFVLSGGPVHFVKKHKRESLLGRLLTVWLEKRRAIRRTLAACDDPSLKTILDKQQLA
IKVTCNAVYGFTGVASGLLPCINIAETVTLRGRTMLEMSKSYVEALTTEDLRTRLGRE
VTARHGARFRVVYGDTDSLFIACDGYSAEAVSAFCDDLAARITADLFPPPIKLEAEKT
FKCLLLLTKKRYIGVLLNDKMVMKGVDLIRKTACKFVQERCRAILDLVLHDPEVKAAA
RLLCKRPPHAVYEEGLPAGFIKIVEVLNASYLDLRNSVVPIEQLTFSTELSRPVCDYK
TTNLPHLAVYQKLASRCEELPQVHDRIPYVFVDAPGSLKSDLAEHPDYVRQHQIPVAV
DLYFDKLVHGAANILQCLFGNNADTTVAILYNFLNVPYKLFS"

SEQ ID NO 16 CDS 17261..18511
/note="unknown; ORF 10; similar to Kaposi's sarcoma-associated herpesvirus ORF 10"

SEQ ID NO 17 /translation="MLVNELSVVLGDWEVTFHRGRFSFVNLTRLQTFKGHGGYARVRL
PFSLDQLLHQHFAFGLVTRLKELPPFSDCVALIAPLDSGGDADAARVAPGFVLDSSRP
LTVWVNASGRHTIRFCLLFLKPIDLERAVTYVFGENGGARSEGTPKPTCATESLPGGP
LRVSGEASQTSPHSFVAYFPTANSVACLSLLRLQVRPFSDDAAHRDARISPKYVTFSN
SGGNVCKASVHTLSPSRCKTAQMEIIYAPGDPNAEIVLGQSGPVLPTHTGGRVLGVYA
DAEKTIQPGSSAEVRVQLIFQQGAAARGDLAFLVTGVAPEPLFVVTPALLLSGCTTHL
RLFNPNGTPTTIKRDTLVAAAAPCPVVRLSSADDAPRDLVASPDTGALSINAFTIPVG
FPGVVSAECHVSLRDNGVHERMNH"

SEQ ID NO 18 CDS 18520..19749
/note="unknown; ORF 11; similar to Kaposi's sarcoma-associated herpesvirus ORF 11"

SEQ ID NO 19 /translation="MGTPVRFFRGEWQTSSLVDNGTPRYSSLVWAATIHDGYLTLVNR
SELCVTERSPCLPACPSIGRLVGKRFPGFAFASATLGDRGTRTVFYAFGHRDNPLDIV
PAVVERADRELVLRVHAPQTTRVSRYGLKVFVAIVTVVRPPGVFLHFPQDRVPIALTD
ACSQEGSRLTSEEPWIKIQGFPVLSDETAHPFLLTQKTKPFTERKFCRLIMDNDQRSA
VNTVYLGKQHVRVTVTRPPETIVTDGPVTATLSLTGNAPIAFRHNPYFELPWSSTTAI
FTPVVYVGLTVCIPPNCSKFVRYGNTYVSAFNRKLTAIISNHAHNGGFRIQDCEWPPN

REIEILVTNVSQAPVYISTGTQLGQAIFVFAPRFGGPAKLRQLLGHRSRALELPGGVT
VDSQKLCRFETMYLFST"

SEQ ID NO 20 CDS complement(19921..20544)
/note="R2; similar to IL-6"
SEQ ID NO 21 /translation="MFPVWFVLFYLSCWAASPTLAPPPTAAGINVLPQWAGNRASLDR
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CMNAMVRGLRAYESYLTRLRMLLDDAPGDADAAAIGSAVTVVLSALDSLIEELPVNNK
IGGAESNEKTVRALGGQSPRDVVLSAFRILEYLQMFLRDGRRAIAMM"

SEQ ID NO 22 CDS complement(20777..21778)
/note="thymidylate synthase; ORF 70; similar to Kaposi's
sarcoma-associated herpesvirus ORF 70"
SEQ ID NO 23 /translation="MIVLVHLGICYVKKIIPVCVAGIAAARLRVFSAPEGAAAVRCAC
RGDHGELQYLAHLDLIIKHGVQREDRTGVGTRSVFGLQARYNLRDEFPLLTTKRVFWR
GVVEELLWFIRGSTDSTELSRRGVKIWDAHGSRAFLAAQGFGDRREGDLGPVYGFQWR
HFGAEYRGADANYEGQGVDQLRYVVDLINRRPHDRRIVMCAWNPADLARMALPPCHVL
CQFYVARGELSCQLYQRSADMGLGVPFNIASYALLTYLIAHVTGLTPGDFVHTLGDAH
VYNNHVDPLLLQLRRTPRPFPRLKILRKVARLEDFTRADLSLEGYDPHPHIEMEMAV"

SEQ ID NO 24 CDS complement(22245..22592)
/note="R3; similar to Kaposi's sarcoma-associated
herpesvirus K4 viral MIP"
SEQ ID NO 25 /translation="MRGLFVCVFFAVFACVVDYAFPMGSMSGPAPELCCLGYVTHLPP
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LIDDSEEGLGSGI"

SEQ ID NO 26 CDS 26846..27409
/note="Bcl-2 homolog; ORF 16; similar to Kaposi's
sarcoma-associated herpesvirus ORF 16"
SEQ ID NO 27 /translation="MAAVQGPPPPPEEENENSLPVDVYAIEGIFLYCGLGQAEYLHHP
VFSPIKEFISAFLKDSARLYERLLRHTDYRSLRGLNAIGQGMLQINTDGRHNWGRALA
VLGLGAYVVDKVKDDERLLTFAIAVLPVYAYEALESQWFRSHGEWEGLRNYCERILRH
RRNARRHMCYGVAAGLLALVALFAIRR"

SEQ ID NO 28 CDS complement(27515..29125)
/note="capsid protein; ORF 17; similar to Kaposi's
sarcoma-associated herpesvirus ORF 17"
SEQ ID NO 29 /translation="MTPVYVGGYVDVVSLPKIEKELYLEPSIVATLLPYTDPLPINIE
HVPEAHVGHTIGLFQVTHGIFCLGKLTSHDFLALASRLAGDSRAAQIQLNPMPRDPLL
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SEQ ID NO 30 CDS 28998..29897
/note="unknown; ORF 18; similar to Kaposi's
sarcoma-associated herpesvirus ORF 18"
SEQ ID NO 31 /translation="MFIGRGSVYGSRVATIEGSKYSSFSIFGRLTTSTYPPTYTGVML
GRCLREPKEMSAGLRGLMWRVIRCENLNTFLPGELRFLHLVLCEMYNYGLNVYLLKEA
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KGLGDYVFCQLGLSHSVRVVPENLTDGNYLYNLGSVIPCRLLVALSYCLAFWGHADHE
PWVRLFAGKIFILYLIISGHIMPRKSILEQVGTSGYGGFVEAVCRDVRAVHGIPAWDF
ASAAPALTSQQTDYLFAFNNSVV"

SEQ ID NO 32 CDS complement(29905..31548)
/note="tegument protein; ORF 19; similar to Kaposi's sarcoma-associated herpesvirus ORF 19"

SEQ ID NO 33 /translation="MRTSEKCCMRYPRKPARQITATFWAPHPNNVLFIHKPSLIEERR
NAFVMRNQQLALRVHTLRKNLLRLELDNVLQTHQRETEVVMRDLETIQNMVGDLRSPG
RETANAQTSLNPQPKIAPQTHGDAFVVTIAPGDPGFTVNQDLRLELLPSLYMNQNQWL
PQYGPWYSSLTDNAMQRRVFPRDLRGTTNFQNSTSLKLMSAVISTAASITQDFYADVR
NVSDTQAALCLLNGYYCHRTGTPLPPTRNGLWDNLGTKLATLVSHLKQNTKGLGFEFT
YSNPRQRASLAPLNKETKYNADFFTNHVIYATLAQSGLLPGSKNPGTGQPPGPDLVYI
LATTLFSEDVPPFQAYQWNLRAGLSALGCLVLVYVLLELAQITPRSPHRRLNLASLLG
GRFSKVEDPSGSKQYLKKGQLFDFLTENYISPILSRAPDAPTSFLFPGAYLAALEAKA
ISHLKHTRPFVNLTGSRFNEIFDILNQKLTFRDAGSLIQAQTSLRLTAEEGLAAILSH
PSPPGLAHEIMKSQFGVYDDYDRVYFLVLGYLPVATSVV"

SEQ ID NO 34 CDS complement(31043..32095)
/note="unknown; ORF 20; similar to Kaposi's sarcoma-associated herpesvirus ORF 20"

SEQ ID NO 35 /translation="MAFANQCKHVATLEALPASRKRAGTRAHLAVYRRLIKHRSLDDI
LKFLSIRPTLRATKNVKFRIFFEVSLGRRIADCVLTVNSEHQKTCYVIELKTCLSAAV
FPGNAIKISQRWQGLHQLTDSVAYIGRAAPRGHENWSVRPWLLFKNQKTLKTIHTESS
AFPPTFINTTSAALNGFFSQWEDAHVRKMLYEIPTKTSAANYRNFLGPPSKQRSVYSQ
TISDRRKKKRVCDAKSTAGAKGSHAAKKPAPARTRQRAANAPTGNRSGHARPRNNSKH
GRGSAVPGQGNRQCPNITKPATQNRPADTWRRVRCHNSPRRPGIHGKPGSPSGAPAKP
VHEPKPMAATIRAVVQ"

SEQ ID NO 36 CDS 32094..33767
/note="thymidine kinase; ORF 21; similar to Kaposi's sarcoma-associated herpesvirus ORF 21"

SEQ ID NO 37 /translation="MAEGGSGFGDELVRQMRDRKPRWDESSDDTDDVDTESTDLEYDD
VFPVVDTHGLMSPGSQNYDVPTSPSGTPWELLHPDALYAHPRCPPKRAVVPGGGARPK
VSAFSARLQYVGRQSFGDRETRQLTGAQFSSESEHEYAEIPERTTTRPVESGDKRNFT
SGRRGAISGPSSTKPSHGAGLTRKTKTSLSVSLKNLLRIKDDDAKVDVPRPVTVPVHL
MQPHPMTEYRNAFLIYLEGVMGVGKTTLLNSMTGMVPQENVLSCPEPMKFWTCVYSNC
LKEQRSIVKQGTHGKLITSARVYACQSKFALPFRATAAGIGRNLQPWLVGNGSTKPAN
WIVFDRHLLSATVVFPLVHVKYNRLTPDHLFQILSLFSAHDGDVVVLLTLNSSEAHRR
IQSRGRKEEKGITQNYLRQVAWAYHAVFCTWVMMQYLTPEQMVQLCVQTVSIEDICNM
NSRLTHRFLTLTKLHEQSMIPMVAEMLVSVKEHVTLMEVCLGLFKELRKLQILIVDAG
EHLDDACGLWGNIYGQVMSNEAIKPRAVNWPALESYIQTLTKLEGNGAY"

SEQ ID NO 38 CDS 33754..35868
/note="glycoprotein H; ORF 22; similar to Kaposi's sarcoma-associated herpesvirus ORF 22"

SEQ ID NO 39 /translation="MARISFIFFFTIIRCSVTDKYVYDEKSNVELEFNGTIYQINWRN
VSKELTSIVMEDAWYDSLLLEPLSVTLEKRKSLLRSSIVNVHNNDYTFCKSSSDHVIN
LTVDFNYSSLPGFTGNFNVMTHALTQGVLLTKRELFTNSTNIMDLFYAEKINAEMFKI
TFDYSNVIISGIITENWILVSVTNSSVKSNMQCVALLFGVPSTFPALKGYVSYRDLLV
VKNSNYALGVIAPKSYNTLDLAFLPKNFTEMFVSVIDSPLNAIDYLKGKLLAIEAKGA
CQNPSNENDILSFFFEVTAVNFLFIKNLQKQQLVNVGCVVRHVAALESLMHLLRLCYP
TFKLYELNLETLSHIAESQVFNLPANSMLSLSVNDQEVVFSMFKIVYNTPKVGGKILN
EIVYITNYMYTKYSENYQLTNTFRRNVMNMYEVLTTIKLNVTDSSVFYPYILFTSMCN
NVEISYMINQIAKPDDITIFRVFSPCFLSLRFDLDENKLRSDAPQTSKRTGSELAQGA
SGFWRLLHAFHATRINEFSVINCTRLAWKQVTALMPLTNITYVISSVRPDHARVYEVS
EVFLNSAMFVSAVYPNCSHFTPPGTALHIPILYNFSAPRIGCPLCDSIVLSYDENQGL
QTMMYVSNPTVQANLFSPYSPFFDNDNFHIHYLWLMNNGTVVEIRGLYRRHALSAIAL
VFAFIGTMSALYFLFKLFSILA"

SEQ ID NO 40 CDS complement(35865..37073)
/note="unknown; ORF 23; similar to Kaposi's sarcoma-associated herpesvirus ORF 23"

SEQ ID NO 41 /translation="MIKISDLKARLVGGAVQLSNGEYVCHVVYSSALAAMVGLPGPAV
PLPLLFKKFSTIYSNMMPLYAPKRPELSMLRIMVSPHPYALNSCLCVGTDEGERGVSL
FRDPVIRSSDFEDTPITVNSKLVIASNSLFLHCRPFSVPATVKTPPVTLTNNKQITIN
ELANTTQEYDPNAPPTLCSALPPDNKKLRSILKQPPATSESNVQSDCLLADIFFAMGS
RQPQIGESPITAFNTVTIMQRANNSIMFLPNLKLKPIQHLFLKHVLLQRLGLENILFH
FKMLYANTCKAAGPYQREYFESMLSRVKQRLEDMVFCLNSIESHDFQKDFRVLSRAPQ
RLLTATDKYFLMFPPQNRELAIQVGAEVIESICDGTPLSEVLANLSPRVTIQKETGNN
LLKFYALLTV"

SEQ ID NO 42 CDS complement(37123..39321)
/note="unknown; ORF 24; similar to Kaposi's sarcoma-associated herpesvirus ORF 24"

SEQ ID NO 43 /translation="MLLQGPVLLPACPATVAANAPSPANSDFKTQLAIFCCLATNNEI
LENVSLEALDRAMQTETTFYACRALRRLVLGEGLYPFIHRQGGIVGKTGNEYAGPGLI
IDDAIGCTFSHIETHTFLPTVFTYELSDTVLVQSDERILRSLYCSPLMVCGVNYQSMF
RILCRYLQIWEFEECFAAFTRTLPEHLIGTCYQNYFKLLEPFKILTLARCPPPCAKLH
LNYLKFNILGFTSDWISHPELHRVQTVIIHNIESNPVLLKNLSKQNKFQDIKVASELI
IDYQNIVNQSLDVNLQVKINKKDPGKKPYKVVVVTPKSTYYLTFPPEVPIFRVAMCMS
VAEHVCHSCDRLYPNTEFLGPGETPRVLEAMFSRIQYAPKDRDYNFIFNADQNPDRYE
QARHDHQTEPLPDMFDPVKHMSLHNFKISVFNTNMVINTKITCWSLAGTFESIIDIPR
LTNNFVMKKFSVKEPSFTVSVFYSDNLCNGAAINVNISGDMLHFMFAMGNLRCFLPVK
HIFPVSIANWNSTLDLHGLENQYIVRRGRRDVFWTTNFPSVVSSKDGCNVSWFKAATA
TISKIYGRPLLKKLSDELNPILSVPYARIDQVKNTIFTTLETRNKAQIQTLHKRFIEC
LVECCSFLRLDLGALNRAARLGTFDFSKRIISHTKSKHECAILGYKKCNLIPKIYVRS
KKIRLDELGRNANFMSFIATTGHAFSNLKPQVIRHTIRRLGLHWRHKAKI"

SEQ ID NO 44 CDS 39323..43459
/note="major capsid protein; ORF 25; similar to Kaposi's sarcoma-associated herpesvirus ORF 25"

SEQ ID NO 45 /translation="MEAALEVRPFPYMATEANLLRQMKESAASGLFKSFQLLLGKDAR
EGGVQFEGLLGVYTNVIQFVKFLETSLAVACVNTEFKDLKRMTDGKIQFKVSVPTIAY
GDGRRPTKQKQYIIMKACNKHHIGAEIELSTDDIELLFIDRETPLDYTEYAGAVKTIT
ASLQFGVDALERGLVDTVLNVKLRSAPPMFILKTLSDPVYTERGLKKAVKSDMVSMFK
SYLMDNSFFLDKSDIAVKGKQYVLSVLSDMVGAVCHETVFKGTNTYLSASGEPIAGVM
ETTENVMRKLLNMLGQVDGGMSGPASYANYVVRGENLVTAVTYGRVMRTFDQFMKRIV
DRPNAQPSVDDDRDAVADGQDSLAKTPIAAAVIQIGDKLVALESLQRMYNETQFPFPL
NRRMHYTYFFPIGLHMPRPQYSTSATIKGVEHPAEQSVETWIVNKNNVLLSFNYQNAL
KSICHPRMHNPMPCGQALGQAFPDPGHVHRYGQRSEHPPNMNLYGLVYNYYQGKNVAH
VPDVALKATMTTDELLHPTSHETLRLEVHPMFDFFVHQQPGAQAAYRATHRTMVGNIP
QPLAPNEFQNSRGLQFDRAAAVAHVLDQSTMEIIQDTAFDTSYPLLCYVIECLIHGQE
DKFLINSPLIALTIETYWNNAGKLAFINSFPMLRFICVHLGNGSISKDVYAHYRKVFG
ELVVLQQALSKIAGHEVVGRRPASELINCLQDPNLLPPFAYNDVFTNLLRQSSRHPMV
LIGDEGYETENDRDTYINVRGKMEDLVGDMVNIYETRNNADHDGRHVLDVGPFNENEQ
HMAVLEKLFYYVVLPACTNGHVCGMGVDFDNVALALTYNGPVFADVVNPDDEILDHLE
NGTLREMLEASDIHPTVDMIRTLCTSFLTCPFVTQASRVVTQRDPAQLLTTHDDGRYV
SQTVLVNGFAAFAIADRSRDVAETMFYPVPFTKLYSDPLVAATLHPLVANYVTRLPAQ
RVPVAFNVPPALMAEYEEWHKSPMLAYANTCPMTPTSLSTLASMHMKLSAPGFICHAK
HKIHPGFAMTAVRTDEVLAENLLFSARASTSMFLGQPSVMRREVRADAVTFEVNHELA
SLDMALGYSSTITPAHVAAITSDMGVHCQDMFLMFPGDSYQDRTLNDYVKQKAGCQRF
GGPGQIREPVAYVAGVPHSDNIPGLSHGQLATCEIVLTPVTADVTYFQTPNSPRGRAS
CVISCDAYNNESAERLLFDHSIPDSAYEYRTTVNPWASQQGSLGDVLYNSTSRQVAVP
GMYSPCRQFFHKDAILRNNRGLNTLVTEYAARLTGTPATSATDLQYVVVNGTDVFLEQ
PCQFLQEAFPTLAASHRSLLDEYMSNKLTHAPVHMGHYMIEEVAPMKRLLKIGNKVAY

SEQ ID NO 46 CDS 43491..44408
/note="capsid protein; ORF 26; similar to Kaposi's sarcoma-associated herpesvirus ORF 26"

SEQ ID NO 47 /translation="MALDKSIVVSVTSRLFADEIANLQSKIGCILPLRDAHRLQNIQA
LGLGNLCSRDSAVDFIQAYHYLDKCTLAVLEEVGPNSLRLTRIDPMDNYQIKNAYQPA
FHWDNYSELVVIPPVFGRKDATVSLESNGFDVVFPAVVPEPLAQTVLQKLLLYNIYYR
VAETTPTDVNLAEVTLYTTNITYMGRNYALDVDPVGSSSAMRMLDDLSIYLCVLSALI
PRGCVRLLTSLVRHNKHELVEIFEGVVPPEVQALDLNNVSVADDITRMGALITYLRSL
SSIFNLGRRFHVYAFSSDTNTASCWCAYN"

SEQ ID NO 48 CDS 44433..45242
/note="unknown; ORF 27; similar to Kaposi's sarcoma-associated herpesvirus ORF 27"

SEQ ID NO 49 /translation="MSIPKIMTVSRDNEGTVCEVAVDNGRHRAMIYYPKTTNLANERA
DVVKEAFDTETPVDIVKQIVNEGLAISKKNCVRLALYLYFYLQYVCFALLLTWQLNPY
MDPPGLVFAVNPMGPKHVTKLPHPAIVAVGCGADAICKNCSVPDIKTELGMVYHNGSS
DSGQRAHYGLALLKAAWLVMGNVCPEPVVRQGAALLGPWNRTEWSDFKSAMAATTFCG
SRGVLWSPIHEKNLCRPTWNDVINTSVFTNESLCPNIPVVPESVIVLNGDA"

SEQ ID NO 50 CDS 45408..45683
/note="unknown; ORF 28; similar to Kaposi's sarcoma-associated herpesvirus ORF 28"

SEQ ID NO 51 /translation="MTAHTNGVLTTTGFSTSQPESVQVSPFYRVITKPPVMGLFFCVA
MCVIALVWYVMRRVCCKGRVVADSCRDPRQPAYEMLNVRLRPHGTNP"

SEQ ID NO 52 CDS complement(45733..46779)
/note="unknown; ORF 29b; similar to Kaposi's sarcoma-associated herpesvirus ORF 29b"

SEQ ID NO 53 /translation="MLQKDAKLIFISSSNSSDKSTSFLLNLKDAHEKMLNVVNYVCPD
HKDDFNLQDTVVACPCYRLHIPAYITIDETVRSTTNLFLEGAFSTELMGDAATSAQSM
HKIVSDSSLSQLDLCRVKSTSQDIQGAMKPCLHVYIDPAYTNNTDASGTGIGAVIAVN
HKVIKCILLGVEHFFLRDLTGTAAYQIASCAAALIRAIVTLHPQITHVNVAVEGNSSQ
DAGVAIATVLNEICSVPLSFLHHVDKNTLIRSPIYMLGPEKAKAFESFIYALNSGTFS
ASQTVVSHTIKLSFDPVAYLIDQIKAIRCIPLKDGGHTYCAKQKTMSDDVLVAAVMAH
YMATNDKFVFKSLE"

SEQ ID NO 54 CDS 46905..47135
/note="unknown; ORF 30; similar to Kaposi's sarcoma-associated herpesvirus ORF 30"

SEQ ID NO 55 /translation="MENDTPKDKISEADFQQCQAFFHRPIRDLISSGADALNHFSLSE
SDGHKLERIVLLLDLVGTECLSYTTIAAKNVK"

SEQ ID NO 56 CDS 47093..47746
/note="unknown; ORF 31; similar to Kaposi's sarcoma-associated herpesvirus ORF 31"

SEQ ID NO 57 /translation="MSLLYHDRCKECQMTRVNSPICRFHNVSNLYQCLDCKRYHVCDG
GRNCVIVYTRENLVCDLTGNCVLDNVQDVCSYGPPERRVPDAFIDPLVSHGTRECLKS
DILRYFETVGVKSEAYSTVVKNGQLNGIIGRLIDATFNECLPVMSDGEGGRDLAASIY
IHIIISIYSTKTVYDNLLFKCTRNKKYDHIVKTIRAQWMRMVSTGDPSRVSATGCFT"

SEQ ID NO 58 CDS 47683..49077
/note="unknown; ORF 32; similar to Kaposi's sarcoma-associated herpesvirus ORF 32"

SEQ ID NO 59 /translation="MDAHGLNRRSVAGQCDGLFHVILPRGFILANNITCGERQRFFAH
TWFAASGRTSKTLYVWGRVFQNTDPGRGDGPSGPWSGLAISLPLFTTNGKFHPFDVVI

LKADTPDSGSSWTVKFLYMSLIAAYRNAMRGLKDKVSQCTDAAVDGEVHPLTVLKEAL
VSPDTATRPVSACNPLQMLTGLLQSRVRDDYVTHHRALERPGNVRGQVIAPTRTEMPN
GSPSRVRLGFRPPKQANYPKTWAQARHVFSSRAYYVCVYDNEELDTKWQRQDPRPLPL
DWSDPVAYLLEGDLFLGAKQNAFVDSIEKTCRCQNYTIKQFFPVLINRDNETVDLIKE
HFIEACFVIRNQVSERSAWVKAALFRNDSNTYWKDVLGLWEHGPHKLGTAIKLPTSEP
CNADVNWSWLLCDEDITRSISGQSTVCLVVSPTLTAWLVLPGGFVIKGRYDLSSEDLM
FVASRYGHPASSHS"

SEQ ID NO 60 CDS 49049..50059
/note="unknown; ORF 33; similar to Kaposi's
sarcoma-associated herpesvirus ORF 33"

SEQ ID NO 61 /translation="MATQRRHILKSFLNKECIWLRHPGTSAFVRVYTATTAHSAVFDP
PVTSENAMSLNFLNVMIVIMKPKEFGPCVTVYMNGDILDFCATESVAIRDVPGRADLC
LIRFGTLSNAPRSVPIPGPLNPHPRETVPGLTKQEIIYTSQTVPRGQIPDAIKGKEFH
QINPFLWFDGGAFWQLFLSVDFMLLCPALDTVPSLARIVGLLTQCDKSTCKICTGAHV
HVNPYRGYTPPDSQGTSPSCPCLISCGARRAADVLVTGHVNLLGLLFDPKASPKVTKL
RLKRNPRPVPIEDAMSGVTAEGTEVQPTSLPWALIRLPDLASRVMLYGCQNLKSICLR
SY"

SEQ ID NO 62 CDS complement(49977..50960)
/note="unknown; ORF 29a; similar to Kaposi's
sarcoma-associated herpesvirus ORF 29a"

SEQ ID NO 63 /translation="MLLTSYRERLQNNLRVVTDGGCENWFRQPPVIISGNDKTERMAH
PCLGVIHAVNAYSSVLDDYLQTYRRVQEPMPAPTLGKPRISSHATLPRLTEELTNYLK
QTCCRVQMANAKDQYMEYQSAQRTHEAFLECPVYAELRQFLANLSSFLNGSYVPGVCC
LEPFQQQLIMHTFYFIASIKAPEKTHQLFATFKQHFGLFETTDDVLQTFKQKASVFVI
PRRHGKTWIVVAIISVLLSSVENVHVGYVAHQKHVANAVFSEVIATLSRWFPAKNLNI
KKENGTIVYASPGRRPSSLMCATCFNKNVSRCFLSSGSRIASRDWLNPAGE"

SEQ ID NO 64 CDS 50959..51942
/note="unknown; ORF 34; similar to Kaposi's
sarcoma-associated herpesvirus ORF 34"

SEQ ID NO 65 /translation="MFPSSFLNNGHPETERRFVKGVQLALDLCDNTPGQFKLVETPLN
SFLLVSNVLPESRPVRDCPQPEGFDFEHIHLPKLTRMQRVLGRYCDHVNNDDTCVNVK
ASSSNSQGALFYLPYGQDEWNWALTLRKDKLVKMAVEGLSNPTTWKGLEPVDPLPLIW
LLFYGSRSFCREPECLYERNFGMKGPILLPPHMYAPQKDVMTFVHHVIKYVKFLYVNA
GGGLETEPSPPFEASRLRAAIARLGDVEADDAYLSAKCMLCHLYKQNDTISIHETHVG
GVIALGGDGARYITSSVRAQRCTSRGDFVLIPLYNIEGLVSMIREHGLGSS"

SEQ ID NO 66 CDS 51923..52372
/note="unknown; ORF 35; similar to Kaposi's
sarcoma-associated herpesvirus ORF 35"

SEQ ID NO 67 /translation="MASAAAKKMLIKSELESEINKKLSISVFDRFGADSAVFNAQYKG
TRESLRSYNSLKKKDDLATVVGTLETSLREKQSELGLLKGFNRKKIEEFDAVADAVRD
LKDELYGELEILGTLDNESVPVEEESPKDDIIRWKLERLPRVCPKSP"

SEQ ID NO 68 CDS 52278..53585
/note="kinase; ORF 36; similar to Kaposi's
sarcoma-associated herpesvirus ORF 36"

SEQ ID NO 69 /translation="MNLFPWKKSPPRTTLLGGNWSVCPECAPKALDPIPKVQTDVDRT
ASSHITVIKTRKTIAQLKIPNNWGQCSHQATDWTAVLGRGSYGVVRSMSLGRCVKHFG
SRREFFYECIFNDIVRACREKHPLNRGGDRILCFLEPCVPCRALIFPQLTGNLLNADL
KHVNPERLAVEFSELREGVSFLNNICGIVHCDISPENILIKGELTTAYGRLMIGDLGS
ASLHTGTPWTGVMVTSKLGFVQHTYHFKAPARFICKHIYRPSCLLYRCLLSCAGGPQA
HMLNQPFQITPQLGLTIDISSLGYSLLACLEKYLQPADPFPQQGALADASSESAHPLF
YLRCMVPRVVIAEIFSVAWDVPLDLGIDSSGHAPAIPLREAYRRFFANQCSLYRAQYK
EDALENASSRLCNSKLKLVLQKLLVRDYFSHCGNCGDHGFFLR"

SEQ ID NO 70 CDS 53566..55008
/note="alkaline exonuclease; ORF 37; similar to Kaposi's sarcoma-associated herpesvirus ORF 37"

SEQ ID NO 71 /translation="MDFFSDEPMVQEMALLDIDEQQRLLSKMSLANFLKHERVRAFFS
DNKKEISMPAIRFVYNFYLFAKVGDFIGNTDVYDFYVTCVFRGRRLTRLSEVYDACLN
MHPHDRHHVCALIEQVTRGQNINPLWDALRDGIISSSKFHWAIKQQNSSKKIFNPWPI
VNNHFVAGPLAFGLRCEEVVKKILATLLHPGEAHCENYGFMQSPLNGVFGVSLDFGIN
VRSDPKDGLEFHPDCKIYEIKCRFKYTFSKMECDPIYAAYAKLYQKPSMQTLKGFLYS
ISKPAIEFVGEDRLPSESDYLVAYDKEWEVCPRKKRRLTAVHHLVKKCMIHNSTAPSD
VYILSDPQETGGQINIKAHLSANLFINVRHPYYYQVLLQSLVVQEYISLSKGTKNLGT
QKNFIATGFFRKRQFQDPSCCTIGEFAPLDPHVEIPTLLIVTPVYFPSVAKHQLVKQA
TEFWAASAREAFPELPWDLSSLCANAPPTP"

SEQ ID NO 72 CDS 54963..55172
/note="unknown; ORF 38; similar to Kaposi's sarcoma-associated herpesvirus ORF 38"

SEQ ID NO 73 /translation="MGFILSVCKRPTNTVDVKGEPIDVSKEFDPIIGEESIVLLTADG
TAPAALYKPKTKPSKHKNNKLSDFV"

SEQ ID NO 74 CDS complement(55255..56391)
/note="glycoprotein M; ORF 39; similar to Kaposi's sarcoma-associated herpesvirus ORF 39"

SEQ ID NO 75 /translation="MKISRSDSFILSSWVKLLVILGLMFIMSAVVPLTATFPGLGFPC
YFNTLVNYSALNLTVRSSAKHLTPTLFLEAPEMFVYISWAFLVDGYLLCYYAWAILAI
FKAKRVHATTMTSLQTWIVLIGSHSVVFMSILRLWTIQLFIHVLSYKHILLASFVYCI
HFCLSFTHVQAMISCNSATWSLRVLEQQIPENSLLDTLLRYGKPIGANLYLSLIAMEM
LVFSLGTMMAIGNSFYMLVSDIVFGSINLFFVLTIAWYINTELFLVKYLKHQIGFYVG
VFVSYLILLLPVVRYDKVFISASLHKVIAVNISMIPITCILAIILRIIRNDWKWCAKS
PEYAPLPQGPKEKTTKVKYSPELNALYETEEDVSDYEDAYPKYI"

SEQ ID NO 76 CDS 56526..57932
/note="helicase/primase; ORF 40; similar to Kaposi's sarcoma-associated herpesvirus ORF 40"

SEQ ID NO 77 /translation="MNAREVALTGHVLHISLHSTHEREKLIIWQVHLLVCQQCGIQGD
AAYLFVTETLSNTDWGNIPAINRHAPSINEHGRNYMQWELRTRLRNPIIQLLSRQPGA
VNVRVSEPNMVIVGCERALDHSCSVRVTGAYLHCDTTMDFSLDSVVSPTREFWFSEMF
SHCLVSNIEVYLKTTGGLYYRASSATQCRKRAKDGALGILDIFNCESREIQVAGQKYT
LSIATATFHVLWVDEACMWNGALAEFFRALHNKLFGDREGVAPTLTYVCPGATPEGTP
FPPYFSAFPHLPLVFGRPRRLDVTAVQELPKAQIAVHWPPFKDSILGDQLLIPGISPK
KPGTVPVRWPLWVEDVNLSLCETTESVARIVDPHSIVIIKFSSLLCQHLKCHRAFVKN
ELEYIATICSSDLRLFIQEEYNRLLATIFTWAAASGYTWAAIDKTTVFIKAPQLSAAV
SGFCPSLNSCRRKQCYEG"

SEQ ID NO 78 CDS 57917..58528
/note="helicase/primase; ORF 41; similar to Kaposi's sarcoma-associated herpesvirus ORF 41"

SEQ ID NO 79 /translation="MLRRLKITVHFLSQEQQKVVTRLEAHLGLPVQETSHPPDWLKCE
VCSASVFLKIPAGVLYAGLARDPTREAKRDSWLDCLVEGATLLLNNSVLPIGALAGIL
PTLFANRRCVNFWLLPRAWVKSAPICPPLPIDCVTPPQFVVTKRGPICWYKEWPLPVD
VDFMYYLQEALCVFSVVSNGEGTESHADNIRQLEKFEKVLCLF"

SEQ ID NO 80 CDS complement(58525..59343)
/note="unknown; ORF 42; similar to Kaposi's sarcoma-associated herpesvirus ORF 42"

SEQ ID NO 81 /translation="MDQILKRLMGEQHRSEAVMPETECSSRGPYNYPVFPRLMLEVHK
KNSICMASNTPKLCVRGRLNVPDLGVHVRTRLQSATFTGFVFACVVEHEDMIDALDIY

PHVFSDRVQLFKPASASVTELCCILSMLENYDKPPLSFILSALDRARYLHERYTCNDS
AFVLYGIEVIASTLAAYHELNPPQGILRVPPLVRFKLHKLLDENADDMKGLLKPIYLE
SFRLTENVGEEEGHAETFNIFYCGTIFTRHLHNASVLKYFQITSLHSIPRQTLF"

SEQ ID NO 82 CDS complement(59297..61027)
/note="capsid protein; ORF 43; similar to Kaposi's
sarcoma-associated herpesvirus ORF 43"

SEQ ID NO 83 /translation="MFKMNPGFGSTCLVHPTELSISLFEILQGKYAYVRGQTLHSSLR
NPGIFGRQLFIHLYKTALGSCTYDNVLKDWTNFETTLKTRWRGVEHLTPEFKRSTFES
WARTVRLTVDQLLLNTINQVLHTRTVLSYERYVDWVVALGLVPIVRRTPDGDTIARIQ
AHCQQMRKTYASGDVTISRIVDKLAQEITSIMTDVTSIYIPDYAEVSVEFNGDKAAYL
GTYRQKDITVEVVSRPIIYNGRVAFDSPLYRLFTAIMTCHRTAEHAKLCQLLNTAPLK
ALVGSTCNDMYKDILARLEQSSQKTDPKRELLNLLIKLAENKTVSGITDVVEDFVTDV
SQNIVDKNKLFGTGTESTTQGLRKQVSNTVFKCLTNQINEQFDTISNLEKERDDYVKK
IQCIETQLLQSLPEGGRPRHDINILTQNTLQALSGLRDPTINLSECHIPKGSSVVNSF
FSQYVPPFMEMLKELTSLWEGEMFQTYNLTPVVDNQGQRTSIAYSQDTVSILLGPFTY
IIAKLTHMDLINHSLISLSLHDIADQLYVDSRLSVYINDIGHKYCEQISQPGTDGPNT
EASNGGAAPI"

SEQ ID NO 84 CDS 60966..63338
/note="helicase/primase; ORF 44; similar to Kaposi's
sarcoma-associated herpesvirus ORF 44"

SEQ ID NO 85 /translation="MESSVGWTKHVEPNPGFILNMTSDAKVRGVVDHVSRLSNITTSP
PEMGWYDLAFDPAEDSGPFLPFTVYLITGTAGAGKSTSISALYQNLNCLITGATTIAA
QNLSRRLKTFCPTIFSAFGFKSRHINIAVRKAHQTGAVSIEQIQQQELSKYWPVIVDI
MKEVMAKKPNGMYGTISNANFETLSRMTGPCLWTSNIIVIDEAGTLSSYILTTVVFFY
WFLNSWLNTPLYRQGAVPCIVCVGSPTQTNAFQSTYNHGTQKTEISSCENILTFMIGK
KVVSEYVHLERNWALFINNKRCTDLQFGHLLKILEYNLPIPDEVMSYVDRFVVPKSKI
MDPLEYIGWTRLFLSHSEVKAYLTNLHTCLTLGGDTRDTKLFTCPVVCEVFVKPFEEY
KRAVNLTNLTVTEWVTKNLFKLSNYSQFVDQDMSIVATESTERSTQVTFITKFVKNSH
VSLNGKTKKCICGFQGTYFEFKRILDSELFVETHSQDRPEYVYGFLNTLLYNAMYSFH
AYGVTRSHEKYLQDLKFAPLPAALATGRVDLQTVREELNLEDDIFYHVCSPPPPAGIT
SLQVLVDTYCALKDVFASRIKVACRWFGGEFEKETFSAFTVNMVVRDGVDFVSPSERL
NGLLAFASTVESYKIKGYTFLPVAFGRCQGLPLSDDLRKKMPSLVVQDSSGFIACLEN
NITKLTETMEDGSVFQVCCAGDYGVSSNLAMTIVKAQGMSLERVAVVFGSHKNVQTSH
VYVAISRAVNSNYLVMDSNPLKTLLREPVDNTSAKHIVRALHNPNTTLIY"

SEQ ID NO 86 CDS complement(63379..64437)
/note="unknown; ORF 45; similar to Kaposi's
sarcoma-associated herpesvirus ORF 45"

SEQ ID NO 87 /translation="MAMFLSDPSRTPPATPRMLPIPGAPRKKRTRRFLFAGSRTGLPV
PPGYGGPPVIDMTAPEDVFDQDSPPTTPKTPDETDSHSENSDYSDVDEEDEPPVSSPP
RIDPHARDGESFNQSGRLPTVITSTGATTPPSAPAPLTAFGGPRPVAVVTGQHRAPQS
SESDSEDDFFIDDYEDTDESGGEADGFSPRASPAWSGDISRSPAEGGWSSDEEEPVVA
GSTAGQETIIISDDDEVDDRGSVETWDESDADEGTGATDVIDLCSSSDSDDDADHVTS
GGVRAACKRRASRRDCNGDDDVIYVGTTQGPKRRMTSTTGGGATSNPEGPGVSGRQTM
AATPPVCGNDNYPWPWLD"

SEQ ID NO 88 CDS complement(64479..65246)
/note="uracil DNA glucosidase; ORF 46; similar to Kaposi's
sarcoma-associated herpesvirus ORF 46"

SEQ ID NO 89 /translation="MEGWLKTIVWSKMSPEVLEEPSTQTLLLSDSWLEFLNLSPFLKQ
KLAALLKRVMDMSNVTVIYPPIDRIMWWSYCCEPEDIKVVILGQDPYHRGQATGLAFS
VAPDYSIPPSLKNIFKEIANTVPGFTAPSHGCLDCWAKRGVLLLNTILTVERGKAGSH
ANLGWDWFTSYIISCLSAKLQRCVFMLWGRKAIDKATLINGQRHLVLKARHPSPLATA
HAATGSPWPQFLGCNHFKLANDYLVQNRRGAVDWNIN"

SEQ ID NO 90 CDS complement(65222..65731)
/note="glycoprotein L; ORF 47; similar to Kaposi's sarcoma-associated herpesvirus ORF 47"

SEQ ID NO 91 /translation="MRSMYTLSLFITCGFFLITCCTGLVVNPCCKIIPLSDFIFPEPF
EIASFHLTNLALCPGLCTATLRYKADRSTTEICVNGFHLRAFFIRILYKLNYSVPREE
LQLLNYMQYSLDEFLAEFEDFHINGSESGTAYTRPPLLDFSDRSTKVSRIRKVITRRG
DLWRVGLKQ"

SEQ ID NO 92 CDS complement(65999..67168)
/note="unknown; ORF 48; similar to Kaposi's sarcoma-associated herpesvirus ORF 48"

SEQ ID NO 93 /translation="MAVSIPVKGVNRETESNWRSIVTTFERHGNADRAIRSLLRFFKG
VDHPGFLASLVILKDVTIDSEKTIERTDLIPLLQGVRFVTQQIYMHLKDHASESPMAE
IWRDCKERFCLALELACGCQRCASAARQLRACQQACRPPKLNPHKQQCVAARLLTAVY
NQMVLRTRVSVSEFCLNALMCVPREFGFVSGDVRVETSRVASCLNLSWLYLILDSYVR
TDLTNLEMAMSRACRIHGLSAGDPFYSALVWLKNSYACDTNTFFFTVNSTSVTTPILM
DICASLTGPVPDVIKINMLPLVNDQMHPSVCVERANFTGSCPKVSPTHHLDGLKLETT
SLTLAADSLDDILQALELICGDDEGILDSYISDINTETEVDESSIEEEIVFEELS"

SEQ ID NO 94 CDS complement(67398..68303)
/note="unknown; ORF 49; similar to Kaposi's sarcoma-associated herpesvirus ORF 49"

SEQ ID NO 95 /translation="MSRHYGKDHLLNHMYKFHYPPLGMIVGEMNTLTVNARNPLYQAA
TLRVERALYLSKILQVLMQHRQGERFIVPQCRSNMVYCLKELHKITNDRIRGLINSVL
PLVDAGCVGFDEELVRVLPEILKLEYPHAHELLPPHDPTSPLSWCLSHMVGVTKTFKG
EVKEMIDTFHDLSVPSFQYLASLVKKFFLVEEVIYEDYQDTQFNVFLNLCFFWTTVIK
MYQSCIFKDKLLDTIKACIELLKGEARQFFGWYDLNTPNLGSSALVKYTEHLIRALSV
DSSAIPIGEICSHLHHCKHALLNLE"

SEQ ID NO 96 CDS 68494..70038
/note="transactivator; ORF 50; similar to Kaposi's sarcoma-associated herpesvirus ORF 50"

SEQ ID NO 97 /translation="MECASLGPISGLIADLNLFNLFCLYRGSRVKTRGAATCNVPCAE
CAQGIVRILTERALCCTEKMFIASACSGVVIPPQLARVLHDVYAEMKAKCLGAWRRLI
CCRRPIMAIADSVLVTYNTLDAEGKLELRLKALCKLVFQPIFLQRILAPMQLLANGKM
VPDNYFTITGTAEKRRPVVTGSTSGMTCPGSSLVPDSLILPVCEPGLLPAPLVDLSNV
LENPEIILSAPPLSQFVITNTHPSLPQSVSIITPTQGVVPGQCFMDTWKAVSQSIHHQ
AQTPILAAALTGSTSAAPGPHIACSPVAGTSRQVEGSAGVDCGKPACVPQPALPPNVP
AKRMETVAQLGNAPVKNVHIGGRVYAPLVNIPIIDLTSPSGSGQSPADIANTPESRMA
AGSPPFAETAATVPAKRKQPREDVADKRLKGDVRGAATVNHPFPGPSGMRVREQGLFD
LIESSTDVTANASGPKNDDDMLAAILQDLYGLQSPPAIDSPSSNSDNEEIFPEVSPPS
SGHGSP"

SEQ ID NO 98 CDS 70355..70888
/note="R4"

SEQ ID NO 99 /translation="MPRVKTQPKRPQVLEFMPLDLHGGTHTEMDSQNLCPDGQDLLGS
YIYTENNGPFSQIMHNGQSNTGTGESFGSYAAGDGFLGGSVSGMYGNNTGEGACSKRP
SACRKRSAALIHAASEASVAEQGTSQGAHAVSDRIGRDGGADNRLLKVSARLSDKTKS
ALRSHPCLRCYSLMFNT"

SEQ ID NO 100 CDS 71468..72160
/note="R5"

SEQ ID NO 101 /translation="MGFGNIRLGWRLCFMVWVAXIARGRSVCPTWHLTDGKYEAVYRH
YLEECRKHEGSGSLDGSGQTKGSGTKATTEANISIRPNVVTSGQNKEPPGTAPRAESS
HDLPRIKQVNALRLSTPELAQPLPVVKSTPRESQSGGTPWNARPHAFIMHTNDMLNPS

VVLSFRAIRARSTRDTEQSVRDRNTVTTSYRTPGRPSLFQARPSSHGARLPPSPRTMA
RYAESRTICDQN"

SEQ ID NO 102 CDS complement(72401..72820)
/note="unknown; ORF 52; similar to Kaposi's
sarcoma-associated herpesvirus ORF 52"
SEQ ID NO 103 /translation="MSSTRPKTRAPKKELTMEELAAQVQKLSVENKQLKKLINSGDPT
RSGSDPVISNTEKEAKIAAAVSALCNVATRKIEAKVRAATAKAVTRGQMEDALAGISI
RVDVSMDETTRGGIAASADGALRRRRAQSRTRNNDAD"

SEQ ID NO 104 CDS complement(72884..73198)
/note="unknown; ORF 53; similar to Kaposi's
sarcoma-associated herpesvirus ORF 53"
SEQ ID NO 105 /translation="MTGSIVLALALLACLYLCLPVCATVTTSSTTGTGTPPVTTNPSA
APSVTPSFYDYDCSADTYQPVLSSFSSIWAVINSVLVAVATFLYLTYMCFFKFVETVA
HE"

SEQ ID NO 106 CDS 73274..74146
/note="dUTPase; ORF 54; similar to Kaposi's
sarcoma-associated herpesvirus ORF 54"
SEQ ID NO 107 /translation="MAEVTAHTVPYAFDSCKFEIIPKNNSSRIALRNKFPVVVKPGEP
LVVPLGLKIIRAPQCAFFLSGAPTDEVYYHTGLIDQGYRGEIKLIVLNKTKQVVTLYR
GEVNVSLIAFMYASPGPLKCPILNLPHYSLDAGFDVTSPHAMTIPPTDRTPFTLSLYY
KSPQLSTPHVPLIVGRSGLATKGLTVDATKWTQSLVHLRFYNFTKEPIDIPANSRICQ
VVFIHEDHVPSGWNILRSRVQLGSTLQISWAKIRFTDVATLPKTHPLNSRHTQSQTEP
ETARGAKGLGSSGL"

SEQ ID NO 108 CDS complement(74207..74839)
/note="unknown; ORF 55; similar to Kaposi's
sarcoma-associated herpesvirus ORF 55"
SEQ ID NO 109 /translation="MAAPGSFWTCCGFSPFGRVGCQYRPLPDPLNECPTHWRTEIAMG
LPPGVDMGDVKQAEMCTAALRQTYLLAVQSNKITEYLRRFDAARVPAGCQETVRIQIS
KLKSIQNVIWNAMLSLAIGDITVDESAFHALLNKRADETVSLLEMEKLATTIASDDSV
TWAAEINNVLVDTEASSNPSHPVIRQPTPQLAVADNIVPDKIIQDAQADG"

SEQ ID NO 110 CDS 74851..77337
/note="DNA replication protein; ORF 56; similar to
Kaposi's sarcoma-associated herpesvirus ORF 56"
SEQ ID NO 111 /translation="MVDEIRAIFSTSGDMAEVITDILTETQATASFFCVLHDRGDAPI
NTPHAVIKLCLPAKRPGGGPRCLPLMVLNLPAWQVNLFLTGDAPLTSDNIKDRIDLAQ
TEEILEPILSVLACKRSAQQTKHDSFKSKVAWFRAKFVSALRKVYKMTPSPYWMITLL
GSFEASFVLAGTFYFFQSHICTAETLVHLTRLFSSSQGQSLVTVNTYDELGRVFGRSD
FLGIVPNFWAYLKYKMQQDDVESRAIDQTINSIRGGLMLSPQDLVHFIYLSFYECMNA
QTFLSYSRTTSSLPTPATVNPPQLCRRLEADFKEHVMAYYNKASYLSTYITILTVPAP
LPDGYENFQELACQYWCGQSRDVAEIMTRINDQYPQLNLTKDLSGLLDLAALDQYSGG
PKENLFTVASRIPTYRCEFLNKQYFVLMHADCIDAYWKQNIIVPEDAQLQGLTDQDLT
SRIFYCDLGLSLPTFKQQILVSRHEYFNPRLPVYRWVLDFDLKVTEGRRTLNDIYNIC
VTLRQVILETLQLIGPLKPNHPVYFFKSACPAVTWPDDISDTAFCHCDAKIGMRIVTP
FPSGYCLVGSAPLVSLTDILNRVVKLDTRLASEYPGILEDKGPFDSGIYAKGRCVRVP
HCYKVGPGGELSRLLKIIICHPEESDKSAYLKNAFKVSNLLHHAPGDSVTKNGHLVYA
ITDENEGFLESKTKNNLPKTITDLAEKIERTTEKPLIDWAATAVWPKLHDTIQRFFPD
DRIGQFASVSFMHSGDNIIQVKPQKGNNFFCINHKHRNHTQTVRVFLTLHSTKESEVT
VTFMSQCFAAKCNHNSPTAHFSFMVPITGT"

SEQ ID NO 112 CDS 77578..78906
/note="immediate-early gene product; ORF 57; similar to

Kaposi's sarcoma-associated herpesvirus ORF 57"

SEQ ID NO 113 /translation="MRYVFHALICFIGGISSSDFDDSSSDEMDDLSPTPEPEPSTTPN
SFPEGPKSQVVALPKIRKRSRSETPVKIEHRSPLNRSRSRSRTRSGSGQRSNQSGRYV
KRFKPTVDAPRHREPWHRGGKGKAPFIRRDAMAGRGRRTYGHDYRGKAALTRSIKESI
KKMHLPSTMLSRAHDKKVFEGLLPRHLGQCFQVCLPAPPPLQPEVFTDRQLTAIVKSG
GRRDALVAKKVSLAKLTSLYKPLLTFVTGRNNQAHWLATRKNTLASAGLEALAAFIEE
GLAWAQVCVSQNRSLNDSNLDIILDSSQSVCTWFISKIRHLHIQCFLENQGEVSLVKQ
LTYLVCINNRLAEAANLAGEVKLNFKLGMLIGFALTLPALLAEHKLSGESLYLFRSFL
EKYRPGDVMGLLNSIVVEHYTKCRSAECVITTHAMVGSGENNKGLFFFPV"

SEQ ID NO 114 CDS complement(79266..80513)
/note="R6; similar to Kaposi's sarcoma-associated herpesvirus vIRF K9"

SEQ ID NO 115 /translation="MATWRPPQSGGPSAMGLREWIVTHANLATYSGLFWADDEKTRVV
LATTTPWSVGFDYLRDGKMYEDYCNQRNIPLPSGRSRLGQAKARLLGAIRKSAYFIEE
KDVLRRSFSFANVVFRLRSDEEMLCRLCPRASGVAAELRGLRFRMFKRKGADEAGRVS
EYTVKQLLGLLRTRPAGTFTMTAPATEASATATASGEDGRQDNSQGGAVALPGEHALP
LSASSGLSACLAPSVDDPWGFMHIQVYYYGVLQAQTFTHSGMGVRLSTRPTDKNEHHV
CMAPGPLQLWLPPAPYMDDDFMLSRLVNALHALEDGIVLCSCQYGIMMNGYGFLNLWF
RGNTSNTSEPRRVPSGVGHRVFDTDEYMLKLAQSPRPSDPGPPDPFAQIWVSAWSLYE
EEDQSQAPICIVVHQREIYRHFE"

SEQ ID NO 116 CDS complement(80686..81933)
/note="R7; similar to Kaposi's sarcoma-associated herpesvirus vIRF K9"

SEQ ID NO 117 /translation="MAGRGVDIRAWLVAAVESGEYRGLVWENEDKTVVRVPWNKVTAD
RSVWNSEKFFDDYCNMRGICQGEKPSHYGRFRKMRFLYDMRHHKSIRELKFINKAYGR
PGARYRLFRLLPEPVVSCAMCNLMSSTETQCLGLISEFQYDQGGGSGRERRRVFTATV
LARSRMDKNKRVREHRLPGAIQLTFLYFGETVGLERVHAGIRVCSRPCPVLAGHACCF
QDERTLFLPSPGVVDCQFAREDLRVMHKKCEKGVLITLTDTGICVKNLENREMKVLTN
NEEEYKDLPSRQPVQVFDMVDYLRALARSPNPGDEPPRDYAQIALCLSVQSPNPVDAP
IAMRLRYVCETSSVCGTEGCFYPGTTVTSEGRTDCSFQMEDPGEGTSQSHDPAVELGD
SGPDSMDDPDAGTSGEDDGVACS"

SEQ ID NO 118 CDS complement(82262..83317)
/note="R8; similar to Kaposi's sarcoma-associated herpesvirus vIRF K9"

SEQ ID NO 119 /translation="MERPVRVTKPSSLRGWLVECCETGRHPGMRWVDEERTLIRIPWN
HDRGSRGVEEAEKNIFIDYCRSRGILHAAGRELTAKECKNWLSSAIRHSQTVSDVSTK
DNLSTPYPDRCRIIRLLPITVRSCARCDQASGTTAMLRGLREEAVNKFGPVGAGVRYT
GAVGAGGEQCWMLRIMFYYYGDRVGEVVTESSNGIRVLPLSERRPQGHICAAPIAEQA
LVPEIPGHLAEFQAEALRFLDKDLLRGLAFWADPSGIYIRWLGHSLAFVQGNVESTGA
VAVLSCANACRAFNLVDYMTAMARTSPDGAALPQACVYLYFGGVPTPEGGVQSTVPLI
IQLWHECLWRALSAANV"

SEQ ID NO 120 CDS complement(83491..84252)
/note="R9; vIRF"

SEQ ID NO 121 /translation="MDSGCYACILDENSEGIINYLEQVCGIGLEPGMPLPAPLPTLVP
PTRSAYARAHRLGVPEAPLPHQIVPFWRLRIQVFYFGVLALDHTSQDRRGVRLHPRPV
PHPGHLCFYGTGFTVWFPSPDREKLTAEQITQIKTMLVAYNEGIYVHGNETGVYVDNR
NRETLYAAGNDCNGDIIQREVMFLSKQKIFNFMGFMRKLARSPGPESHAPCNGATLYL
SQQPGAQESPQVPISVVVCQDELVQGHMNPSRWCS"

SEQ ID NO 122 CDS complement(85052..86209)
/note="R10; similar to Kaposi's sarcoma-associated herpesvirus vIRF K9"

SEQ ID NO 123 /translation="MAAGESRRGPSRYGMALKEWLTFKADSGLYPGLFWADEQKTRLV

LAATPPSFPNYDYQRDGQHYDAYCELRHIPLPSGRSRLCQARGRLLGAVRKSKYFEED
KEFPTDQFPFTALVFRLRSSEEMSCPVCPRVCALRLELRNMRFAMLGRGMLHALSGPS
VSDQERRYREGHQDGHDAQDDDAAYSSGLLRARLMACAAPSAGDPWGHMHIKIYYYGQ
LQAELLTATGQGIRLSSKPTNKAGHHVCVLDGPLQAWFPPIPQTTESSVVQRLEDALK
WLVDGIIFCSTSRGIMFTITGGPNVWFQGNTVEPYSLPHRAYTGMHVWAFDTDRYLLD
MARSPSPRDTGPPAAFVKLWVSGCSLGEERNSSRAPLSIIVYQTEIYRHFE"

SEQ ID NO 124 CDS complement(86355..87527)

/note="R11; similar to Kaposi's sarcoma-associated herpesvirus vIRF K9"

SEQ ID NO 125 /translation="MAERDMDLKAWFIEAVESKRYPGVEWDDEDKTIIRVPWNRCTDS
RVDEDYNKIFDDFCSARGVCQTGSHAQKFKKIRMLYAVRSHRYLRELTPPSKAGGVSG
ERYRLFQLLPEVTVGCDLCNLIATTSLHSCSMGSCVREDVFERTRRPRAKAPLRVSVY
KRKSKRLQDSSAQPVLGAVEVSFFYFGENVGVQILRAGSGVRICGLPDPKRPGHLCCA
DNPLTCFLPSSQLIPCEFARADLQALQKTCERGLICVMTESGICVKNLEERNMTALTN
YSENYYELRPSQPLQAFDLLHYLRELARSPTPGDVPPRDCAWIFMCPSTQSENTWDAP
IALKLRYVCNDDVSDDVSNGAAGDDSGDEGPSGAGVGASGTTGSTSVSTLAPYGRK"

SEQ ID NO 126 CDS complement(87894..88961)

/note="R12; vIRF"

SEQ ID NO 127 /translation="MAEGRAGSIRVNRPSGLRAWLLDCCDNDKHPGMHWLDEEKTLVR
LPWNHLKGAGGVSDDERNMYLDYCQFKGIRQTGNRRLSVRECKNWLASAIRHSQTVED
VSTEENLSAPAPNRCRVIRLLPIFVRSCPLCNEADATGGMLLDVRNEVTARFRYLGAG
MEYEGAVGGDGEQCWMLRLVVYYYGRLVGNMEVGSPNGVRLLPAPKRPLQGHVCAGIR
PEQALLPHTPQDMFPHQTSMLKWLGKEIIRGLMIYADGSGIYIRYMGHVPAFLLGNGG
SLEPVDIINNARVLRVFSLAQYLSAVSATPPHGTRFPAAYASLHLGGVPTPEGEPCPT
IPLSIQIWHECLWRACGDAAQ"

SEQ ID NO 128 CDS complement(89122..90216)

/note="R13; vIRF"

SEQ ID NO 129 /translation="MTEIEITHNHLRRWIISNLEANTFPEHLCWCDEEKRSFRISWHR
GMSGMQPVVAYCLDRDLECGRQHNVSECRKRLLRVLRENAGFEQDDARATTTRFGGER
FFYLRPAVDPLCYACILDSHSETVLNYLEAACVHGLEPGTPLPPPAPAEADGAARSVY
ARAARLATVAPPHPDQITPFWRLRIRVFYFGSLVAEHTSQDRRGVRLHKRQDPKPGHE
CFYGTAYKMWLPKPQLDGPLTPEQRETVCEIINGCEEGVFLHGNELGMYVDNRTRHTV
RCAGNDAEGNHAQRAVRSSVKSQIFYVMGLLRRLARSPVPGDTVPSNAVTLYLGGRPG
SSKRPQVPVTLVICQDELTHGDIRAARWIL"

SEQ ID NO 130 CDS complement(90462..91544)

/note="unknown; ORF 58; similar to Kaposi's sarcoma-associated herpesvirus ORF 58"

SEQ ID NO 131 /translation="MGTYTSEASLAWLSFMSGTVSASPFILCFIYHSLYFVEPLISVE
NIIFSWGAVGLHGLLLLFCIFGLPAWLSRQVDVPCTISAFLITAGSMASTLGVDLPWV
HVSIFVGSCLCLLLCVVAANDVVYLCPTIAHRYYELGFLAAFSVYYFLVLKNLFLAPV
FLLPLVAFIVGGVCSLRALRSHPLYEAGLQRRHAIFSLTSRRYITYSIKQALEVCGWD
FYLVTVLIGGAAAGTLSVGLTTPLLLGLVHYFFVFHVGLFCCLGLVFRSNVLALVYVL
AAAVLLTLTHVLGPGTHNLFTRVCVFTVFLLTMFGAIGCELQIIRKKLQRAANSPRIV
LGVCACGNLLMAVVFFSLNKVELGAL"

SEQ ID NO 132 CDS complement(91555..92739)

/note="DNA replication protein; ORF 59; similar to Kaposi's sarcoma-associated herpesvirus ORF 59"

SEQ ID NO 133 /translation="MPVSFHYGARVDVDALGSISRVYDHIKGIVKKGVIQISGQGRAP
VLSVLSSVGDAGVLGLRLKNALAPLMVYSDMTDEVSFSFRNTSLGNTFTHTREMFGVN
IAEMNVAFYHHGDESDAEGKPQFVRTTIAYGDNHTSTVHKSVVDEPNLPSFHDRLEQA
GTGNRLFLTVKTLTLLLKWLRQQKTRAKQVVTVSLSETLAVATFTVDGVSKIIDFKPD
TPDAKWTCARGRKLDVGVVSSDLTTHVSLESLVAALNACKIPGFFLPGFRWHANEILE

VEGLPLTDSLADVRLGVMLLKVDPTDRNNAVPGNLSEGADPEGVPELPSPPRTPDLDL
KEQCVPIAEDGAEPTDGGAKSLRTSGSRPEKKHGKRKHSSSPSRGKGKTKTPRATFNP
LF"

SEQ ID NO 134 CDS complement(92868..93812)
/note="small ribonucleotide reductase; ORF 60; similar to
Kaposi's sarcoma-associated herpesvirus ORF 60"
SEQ ID NO 135 /translation="MFGLSIVTAAMESPDRFLYASDHPGFLALTQETWQNRWFPSQIS
LHEDSDEVRLLSPTDREFYQFLFTFLGMAESLVNFNIEDLVKEFSNHDVTHYYAEQVA
MENIHGKVYANILNLFFGGNRGDLMIYAKKIVEDATLAKKIDWLHSRVRKATTRAEKV
LLFLVIEGIYFISSFYSIGLFRLRGIMRGVCLANDYISRDELLHTRAASLLYNTMISR
DESPSVAYIHGLFREAVEIETLFIRSKSRDVTMVNVGDIEQFLQATADRILKSINIPP
LFGARPPNACPLSYTSAKSVNFFERDNSEYVTSVHNDL"

SEQ ID NO 136 CDS complement(93794..96160)
/note="large ribonucleotide reductase; ORF 61; similar to
Kaposi's sarcoma-associated herpesvirus ORF 61"
SEQ ID NO 137 /translation="MNTETSFSAAKSAKPLTLVTDAGTGGCSSSLDPERCAESLVNSL
KATLGWDIEANSLTGLLWHRIMEDRCLVTVRDYLAVFGERLSDEVRAFMSKHEAALDG
LLQDFKQSKAYTNFVNCGYLSAVRFYDTYVLRTQGSSPIFESVAQMFMRVAVFVACQC
IKFPCLRETLRHLVESETELDEMYLVGYAFHYISSQIVCCATPVLRSAGLRGGQLSSC
FILKPSMATEDKTLKALHEEMSPLLASKSGVGIDVSSFAEHKNITSCLKLINAHVGYF
NDNNIRPVGASAYMELWHHQICDFLNAKMPENQERCHNLFQGVCVPELFFRLYETNPD
GQWHLFAPEVAPNLLKLYGAEFEIEYNRLVAAGKHSSSLPLKSMMYALINTVIKTGSP
YVLLKEALNKHHWCETQGSAINCSNLCAEIVQQPEGQASVCNLANISLPKCLRPHRGE
SGVEPGKGDVTFGFELLDDAVEAAVIIVNACILGGTAPTESVRRGQEERSMGIGVQGL
ADVFAELGFGYLDAESAKLDVEIFQAMYFTAVQTSHEIVLLGEGTPFRGWERSRLAQG
VFHWQTWDGVKPSHPPLERWEQLGRSIAQHGIFNSQFLALMPTAGTSQLTGYTEAFYP
FFANIASKVTSKEEILKPNVTFFKRVKPGDLRTVRRYGGDVASFPEPLKDRYKIFLTA
FDYCPIKQLERAGARAPFVDQSQSLNFFLKEEQATRASYIRDLLLTGYRLGLKTMLYY
CRIQKQTKLNALQCLDQVVGDNISSEGAESNCVQKADGERTKVCLACQ"

SEQ ID NO 138 CDS complement(96163..97158)
/note="assembly/DNA maturation protein; ORF 62; similar to
Kaposi's sarcoma-associated herpesvirus ORF 62"
SEQ ID NO 139 /translation="MKTRDANVNKLNDSLMRLLPPPPHRVSLSRGRDFSKGVRDLLSK
YVVSTTTGVEAIKDGFLSVSPTCQTYGDFLIYSQTMSSQEPRGTYLFSFKQTDTGSSI
DMLFTPTSLARLSRMDADSAPQTNRIACVWYGHESGLLDAIPNFEELLETGSLHQFLA
PVGPLVQTVHSTFVTKVTSALKGNVVAREPVVTHIGLTLPSDMFVDLDDSCPSSLRDE
PLPAHSSIYVCLTYIRVNNRPALGLGFFKSGKGYCEIAAQLRDFYSGVIRTKYIQLQN
DLYINRLAFGVVCRLGSVPSGLQPSFQSLHFKGAALPVLKFTEFVSNPGSWKLFL"

SEQ ID NO 140 CDS 97157..99976
/note="tegument protein; ORF 63; similar to Kaposi's
sarcoma-associated herpesvirus ORF 63"
SEQ ID NO 141 /translation="MASSIPAARADNGDENTGGLYKLTDNLLTCTGSLQQLKLLMEFQ
LKPLPTAHLLSMPTVTRFLNTAFKIDNPLVSFIQKHPVFFLMRVARLPEPVITDHQSA
ETSTGILSEVVNVLNTAIRKPHESPAAKDNDYLDNRAILAMITEYIHHVTSRTPSGIP
PTPPMGISHLPCVEQILHETHRQYWNLTLPESLFIDIGEVASPLQTWLILSYCKKLQL
APPPLFPPVDELARRLVTGHHELFVPLSTSLETYITMPVSKQRAFEIYSVFAKSKNIV
DGTPILAFTDTELTTFTPELLFLYDFVIESLCKNQAYGCSRNAIEHFIKKGIDFMAEL
GAFIEKTCGYRSTVSLSNVRAVKARLASCGLSKEACEDFRAMILMTPHETTPKWENFT
DFLEMVNQLTLYGFYFYECLNQYSPTSISLAKIQNILNRVDAEQSDRALWRTPLIGSF
PFPWKLNNVLAFFKPSTPVATLQKIYKAIPSYLMRSLFEIAANKSWGNIALAESAPLT
DIQTAEPDQGPVSAQVIAKYCSRLQISATDYDAAIVSSPGFAAEFIKTKLYPILSEVL
RNTSKKNRSLFQIRWLIVFAAEDARDLAPIRRSLALAYFQIMDILEEKHSPESFYNLL
DYLQETFRCIRQVIPEATCPQEFLQYLFTFQNIPIAASFIQTSMTFVDDLKNGIPGIL

DLVSLGAAFYNMKLLYDSTLDTVEIPTEEGQPIVVSMFVFKSTIRVLEKLLQEAVIAL
TQTSEPMYAAHIRLMQHLTYMQKIAGHEIMTTQLPSVFHEIHEGYLQCFKRFKRLMLH
VTGSCCYSLTRYFGFLYQPPLIPDTIVQKILNFNDKTDTTDDILKSLSQPVRQGPLSA
ENESSSRLSKNNVELLQKLYDDFRTASTNNNPTSIKLEYSGNYNETQVSVDWSTYNLV
TYTAPDDTLKFTPVNTEALDRMFAE"

SEQ ID NO 142 CDS 99980..107626

/note="tegument protein; ORF 64; similar to Kaposi's sarcoma-associated herpesvirus ORF 64"

SEQ ID NO 143 /translation="MELPPIFSKFKIEGVATTHQADCRFGQYAGSQCLSNCVIYLAQS
YFNRESPVTDTNDLDDVLRQGATLDFILRRSGTLGYNQYAQLHHIPSFIKTNEWTAAI
FQSQEYFGLIGLDAAIREPFIESLKSILTRNYAGTVQYFLFICGDKAGAVIIKNKTFY
LFDPHCVPHVPNSPAHVISSSDPTAILEYVSPPDREYTGSFLYIMPSEYVNPEHYITN
HYRTITFAKVHGPHIDISTGIEPCTIEDIPSPPRSPDVTSKSSNLARVPRTTTDTSSA
KPPPATLSGLRGAEPPTSYPDPATNDADTKLLTPAPAQTAVDHPEFQTTPGATLLLSE
LSASRGRKRKLSSLQRYSDSDEASSDDEGAPRRRVHDDAISAEVIWMDDDISPLYSPS
ATPSFDDVFDSPPMSPEFTYEDATEDTDGAFLEQIARDAETPFSAFDDLITDHDFSSL
DKKIEQLIKYEAPSQHLPNISDKQNGRAVREAAALQAMDKIMINIILEHGLITDAQAR
GPSACKNVLQFFILWGEKLNIPISDAKQVLELDLQLIPLHTAISEGKFKQGAFKKHLT
TKINRCLASMRATHADAQKKLASAFNVEGSQISSSEAKISVRALKEQIANHLSPGFLA
VYSADEVKHLRDKIQDLKTGIEQRNKEIQQEELFFDAMLTALDTFQPPPKTAFPMEIF
PHRKTEVMLDHLASITTRLTEDATEALNNYLETPPDQGTHITNIPNFSSIVANIISTL
KILTYAENDMQLNVTPMATYRRQLLYLGGELATIFNLEWPYETVPPVQELPLVARAKA
KMESVTKMEKNQQALDQILGDAETLLDTITATSGDENPVRAMSIPILETYITNAGALI
GSSRNQRFEKLKAAIHDLASSESFIIMLLNNTRLDNISDNLAKIDGILTNNTRFLSNA
TVSKTLQTLGGSLIRECVEALNKRSPSSLNNARLLAVQTILGHASVPDHETLTRIVSG
VASAQKESAGDDPDRWTRVTGHLNELKLVTTQSRVDKATRRKLLMIITRDLKEAEVSQ
ETVLETRWQENVLKFQPSTSKEIEDFLQSAPSAKARKFAEKHLRTLITQFNGHERPPS
EATAVPMDYTPTPIPTPQAVSTATAEKGKAAWNKIQQAFQDFNFHLIDASDWQEMASE
YSRHGSSLPGTVGPKLVRFMESISNTLDDILTQKLASLLPNGPAFRPPAFDWIAPYQT
RVNAFLKTIGLPMVRNLADKIHHQCQTVSHAVQSADLQQATVGTSLERPAAEYCRILS
DMQVAFNDHGIAVRSEAAAYTDAINSPANVVTPPKPNLEAPKKLITATDALTVEDFPD
FLKTSILQQEQRLIALQRAEFQQLEASISAAERLRQSTRDEIAGKMATAITQLLPRAP
VAISSRPLNLSKPIDFLSSTVYDKILDKEPYETAIAGFAWLEIATKSVMVYSQQNETQ
QLNVLLSEVEKQSTVAQRLHDLELSAKNTDDVKVLKQALDELAPLRVKGGKTTVDAWK
QKLESIESLLRATRTAGEISSELERIGTQAVGTITVRDLGTLSDQCREAANFLRQASL
PEGFSDIGTKLSELQAYIKYKKQFLEHFETTQPNVFQRFPLSQNITENVPARPAMDSV
ARLTNHLHVRGSAPHFTTWIETLPTVDPEKPTHVPAHGGAPLHRQITYSNVLEALFSL
CSTTLTPVPTAPGLEIATRARRGAEAATWMDRQWPDIAQTLQDVLDTYEHTTAHANRD
AAFNTFLAMCVFTQIIRGASRAVTLPKLPSTAVDFPEEIVLTPRECTTLVTAMWPTLA
AAILRLKSYSEALGLMSRFLPLMFQALPHLTLEAQVKNGPHNTPPQLRCFAKTEAIPY
FPAQWQSANLEQSLWGQTDFLQICDNNQRKARVAAVTWALTTIDGVVLDQLWSTFKPM
TAASDDTYVDLVETLHLTTFGPRGPTPRRETTTEHPPYEYGQPTGYCISGQSTTPVQA
SNTPVSAFEAVLGAMVFHVPIRIFLAATPKRLGQARGGMGLLTPILECVPDVEPFKSL
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LVTATYSSGGPANFESRPFYVMPGPYPPDWPKTLSVTSNTSVTHLSHDEICNLFTTLS
REHGTVQGRDIFAAAPTNVTPEQTANPPAWETDNRLITQTETAKKPHIIPASPKARTD
PPVETTTHHSQGQASQHANSNVNQPGQITSHASRNTPSTAPQASSSPEKFNTQTVPRL
ISQTSETAHINQPASGQVTEPKGIFGTYKPRVLTEPAKPANAGVASRQPEATTTVPKL
PINPPTARVFIGTASKLSPAVEESHGATPDAHQSKIDREKYAESRPRRTPHLEEGPRE
PHVNTPTSAHINVPSSQGQKTVHGRENPGLQTATPSAPQPTASNPRIQYTLPRTDGRL
LHDESEVESTPTEEVKRSPKTQDVSHGPEPDDSRWTAPLGPTIEIHRLEHPQILKNIT
SLTVPTPRVTPIPPTNIWIPLSHVNIQHEEITRAKNVLMRFIQNVRRKLQASSDALSE
AIARIKFLYL"

SEQ ID NO 144 CDS complement(107637..108146)

/note="capsid protein; ORF 65; similar to Kaposi's sarcoma-associated herpesvirus ORF 65"

SEQ ID NO 145 /translation="MSSLRVKEPIVQGRLEHDYPNHPLVAEMNNLPQGDMSPAQYAIA KRNYLVFLTAKHHYDMYMQKKNGILRKDHLRGLRGKKDASSSISGVLSGSGSAAPSVA PVASTLGSNSFTTISSGPHSLIGSMGPAPGGGGPGSVASSGIGSTSLSPSDATTLDTR RSSQNKKSK"

SEQ ID NO 146 CDS complement(108152..109498)

/note="unknown; ORF 66; similar to Kaposi's sarcoma-associated herpesvirus ORF 66"

SEQ ID NO 147 /translation="MASGRLPNLAEDEAACHGRGSYPAHRWLDGSRLGLDLAASIRSI GLCPECYVCFVTYGLGAWDGRPPKWACTLISAPSFQTALNEIATGWRPDNPPKNGDVR SRLHDIGRSLLEAYAWVLRCICTGVGCPSDEGLSLTAVPRSAWSRYLVVSFQRACCLV CKTLNCRQRFPLVTCLPQHALDLPVLRKKWNGGGCVSMQLNVPSISRRLGANLNESVP GPSDAGLLASLRELAPTVPCGNPFNALLRSLTFRALLSMSRVVLPIGESTETEISRDL GQKVLAYNVLFPCISLPVWSQVVARSVLEKTVPAPRVVVCLECGYCLNFGRGKFETVN FPPTNVFFSRDQKEKQLSICATTGRVYCSYCGGSHMRVISLFEITCVGDPYLRCVLAN NAAHAIRDANSLVSVVVPCLASPDCATGLLKHLRVAELFYLTSSISSLSCGKCNRS"

SEQ ID NO 148 CDS complement(109524..110198)

/note="tegument protein; ORF 67; similar to Kaposi's sarcoma-associated herpesvirus ORF 67"

SEQ ID NO 149 /translation="MSSGKRLVDELCDLVVSYLGPSGISLDLERCQDGAPVYAKGGAV PVCTVRLQHGCVYHLEFVYKFWLHKLERLAYPFAPCFVIINNGLATTLKCFLCKPRDA DAQFGKNLPINSDVYLERNSSVSLGQDDFMKFKARLVFSGDLNVYSSMVICRTYFTEH RQVLQFLVVTPKSAKRLKTLLRTVFALTGHSDGLGALRRTGSVARPSGSELKDIGRGE RAAMTN"

SEQ ID NO 150 CDS 110609..111982

/note="glycoprotein; ORF 68; similar to Kaposi's sarcoma-associated herpesvirus ORF 68"

SEQ ID NO 151 /translation="MFVPWQLETLMRHWPSLRGLVEQSFLPGTPDGAFNSPVLIHTQD SLQPASSCRVCSLLFTLVRTFPPPDSFFEDYGWLCLTCLYAPRSWTATLMVAADLLEL THVYFPQCVKDGPVYTAQSILGIDVQLHFFATRCFRPIDREQILHTSHLNFLQTEFIR GMLEGTIPGSFCFKTSWPRTEKDDQQPTVACCSVGRGSHTNRDNRLPEDLEEAFNSTN AEEKPSLLGVFSATWAESQLLGSDTQQADTHLQPSAFPTPEDADQSQGPCLMHPTLNL KTKNHTASICVLCECLAAHPDAGPVLKDLRRDILENMENNVKLVNRISYILNDPDSLS HVRDEHLRGLIKRCSAQEIHKHFFCDPVCVLNTYSHCPAVLFKCPPPEKYKKLKARLA TGEFLDCNRIFDCETLQTLAVLFKGSQLAKIGKTTSLEIIRELGFQLRRHNIQITHPF QTSNLYI"

SEQ ID NO 152 CDS 112004..112897

/note="unknown; ORF 69; similar to Kaposi's sarcoma-associated herpesvirus ORF 69"

SEQ ID NO 153 /translation="MPKQPRSRLASRAPYAPSVRRPDGPQSTRPASRHGSCKSEIMQW KKLVSDTQFFSALTRRHELGVDFLREMGTPICTSKSVMLPLNLKTIAPGRCVSLSSFG HSSNMGFNCSSCTPTDRSAVSLDANALGEDSARKNSELCSVALTFYHHAEKVVQHKGF YLSLLSHSMEVVRKSFTQPGLLYAHLVLKTFGHDPLPIFTVDADERLALWAVFHTRDL HLGETSLRLIMDNLPNYDITVDCIKQTYIMKFTPSRPDNATVTVPVNSICEAVATLDC TDEFREEIQRGTAIINSQGLL"

SEQ ID NO 154 CDS complement(119211..119735)

/note="FLIP; ORF 71; similar to Kaposi's sarcoma-associated herpesvirus ORF 71"

SEQ ID NO 155 /translation="MFPHKRLVDFGRHLEADDREAVLWLFDRPASDDTPEGFANGLCP STGEPGIPLPVLLEAVFLVGRLDLVSTFFLLDVGFIIERLRSSPSYFSPYKHLMLSID RQLSERDVKNLVFLTGDQLGRRRNQSPTFFRWLSQMEKAALVSPSNYMVLSDLLQAVS

RRDVAKVVAANAPG"

SEQ ID NO 156 CDS complement(119794..120558)
/note="cyclin D homolog; ORF 72; similar to Kaposi's sarcoma-associated herpesvirus ORF 72"

SEQ ID NO 157 /translation="MASVGPVPTGTIDPVLYQDRALSNLLAHEASFVTSTACYGTIQT
EVTVGMRVILGTWMRSVARAHQADASVFPLAVSILDRYLECRSIPRRRFQRLGAACLF
LAGKIRDLNPFKAAFLCFCAAEDFSVADLLKQEKSILKALRWKLEAVLPTDAIGPTLF
KSGFTKEQLFALHSQVVESVHKAIVNPATGGLPPSLVAAACALFSLGAAAPPPARLAE
AVGVSAATLAAAAESVATTLREFDEDHILSNARGSS"

SEQ ID NO 158 CDS complement(120866..122212)
/note="latent nuclear antigen; ORF 73; similar to Kaposi's sarcoma-associated herpesvirus ORF 73"

SEQ ID NO 159 /translation="MWGSRQHRSGIVSGHGLRSSCRGHCGRRGGTREQAGRRGRGRGT
AAPAAAPAPPAPTTSGPQVRAVAEQGHGSDTETATESRHGSSQGSPSGSGSESVIVLG
SPTPSPSGSAPVLASGLSPQNTSGSSPASPASHSPPPSPPSHPGPHSPAPPSSHNPSP
NQQPSSFLQPSHHDSPEPPEPPTSLPPPDSPGPPQSPTPTSSPPPQSPPDSPGPPQSP
TPQQAPSPNTQQAVSHTDHPTGPSRPGPPFPGHTSHSYTVGGWGPPTRAGGVPCLRLR
CTSHNSHEDEAPERQQEQEGEERQQQPARPPRPPRPPRYPIPIPYPSSEEEVPRKYRP
QRRFYRQVLGPRIDPPRPGPWCHGVIFCNSDPYSLYRLARCLQFPGIRASSVRVLPDA
PGSPVIPAFCITVFCQSRGTAKAVKKARRRWERHHPSAPHFQASIVRMDRGLPIQH"

SEQ ID NO 160 CDS 122866..123627
/note="R15; similar to Kaposi's sarcoma-associated herpesvirus K14 and ox-2"

SEQ ID NO 161 /translation="MSGGITLTLLLATLATVRCALQTHYAAVPVHSTASLGCVLTTPH
DVLIVTWQKQESPSPVNVATYSSEAGTVVQPPFAGRVDIPEHKLTRTTLKFFNATLED
EGCYLCIFNAFGVGKLSGTACLTVYVPLSMSVTFYPPINPTQLVCRAEASPAPSVNWT
GVPPELCSEPEVFPRPNGTTLVVGRCNVTSVDPEDLENATCLVTHIGGLAAARPLDPV
FSDPLEGTSHYVVGVVAAAAVLGIFLTGVFLYRSM"

SEQ ID NO 162 CDS 123924..124952
/note="G protein coupled receptor; ORF 74; similar to Kaposi's sarcoma-associated herpesvirus ORF 74"

SEQ ID NO 163 /translation="MDALNNNLNLLMDFLSNYSNSYSSYDDNMSYTLDTESTLCRLTV
VFPPTVYAIICFFIFCITLFGNALVLYIFFKFKALANSVDVLMAGLCCNSLFLCASFL
FSWLLYVAPQMLTSATCKVEIFFFYLYTYFGVYIVVCISLIRCLLVVFSRRPWVKHGA
SGFLCVCVSLIVALALSANASLYRTALRHPETSEWICYEDAGEDTVNWKLRIRTTSAI
CGFLVPFGLMVLFYGLTWCMVKSTKLARKGAVRGVIVTVVVLFLIFCLPYHLCNFFDT
LLRTGFLAETCYLRDVISVAMHICSLLQSMYSAFVPVVYSGLGSLFRRRVRDTWSVFR
CFSTSGSL"

SEQ ID NO 164 CDS complement(125057..128953)
/note="tegument protein; FGARAT; ORF 75; similar to Kaposi's sarcoma-associated herpesvirus ORF 75"

SEQ ID NO 165 /translation="MAQRTNPRWAAAALSPEEEAFIHDNSDAESVLALVPEQCFSEFL
LWLVTRPSDNFDNDDDDPALGVIWHLLAPLVNYAPLETRSAHLQGHHTISLPYGPDLM
RQPTTRSSEIVQCLRDSGLDRTLRLEVGRHLSCQTRRFVADRVPPGTLAALTLGTLVE
YDVRVQRQLPVTLQSTAWRPLPERDPICAAVMLPLQRNILPLAVQASNGNSYTVSRYA
VMARRSYSCVFQRLPCENVTHIADSFTHLHSAIQTGAGALQNILFHATLLPGGEIRSA
LCGFYATTPSVGAFSRARHRAINTTATLHCQQLARTGTPVLGGFLKTVHSATTSEANV
ITTTSLLSCVPQAYTFLRRSLFSQPIICLGSFEPVDGDGNQRSLYLGSAAGITRITQT
LSLAYEILEGPLFTSINRAHEPASVIGHLGALVSRGGLRLFVSQLPPTILSQLTATPD
ISRETVNDILVNKFLNVSACVVFAVLPRDTEPEPGPLDAIRRAARICGCPFAVVGETC
EELGIQFVNDLELWNPGAWPIRQPTSAEVIATFGFDEQPVSSNWLVRPEEPEDGGEQA
PSPTDWGLFRLASVVDQLLRCPTVGSKEFVTRHVDRCSNGLVAQQCEVGPLGRPLSDY

HIVNHTSVFTDRMARVPIYRPQPITRQDATERLVSPETWVTQGRGRNRWVGQCVAYGE
QAYKMGINAAVGARYAICEAVTNIMLAHVRRLSDITLTASVGWNPEDDQAWLLQHTLF
ACKELCRDLSINFAITSAGSTPCLSEELISATQQHQTVAPVPFNAVVITATAEVKSSR
QRVTPDLKATGNLIVLVSFPVPHLTQGSTFEHLCLLPSPTLPDVQATHLANLFMLTEA
LLSRGLVVSGHDVSDGGMVVTAIEMALAGNRGLQIRIPSEETPLQWLVSETPGVIFEI
QPQHVDEVRQACQNFDCRATVCGTVGQEGLSERIVISHNNDEVYSQTLTSVAANWTSF
SDEQWYSWGPSFTPAQELYRKDYGCNQHNLGHLAEVCRNSELTLFATPSRPPAVAALV
TPGAPLPRALMAAFTNVGFDVAAVSTDDLRGGNILRGFSGLTIGGTVGIEDSYVGARC
AIMGLLNDPGCYGGLMAFFRRADTFSLCCGEFGFQLLGALGLLRETPHDTPGPKTPDQ
WDIHLEENASGNHECLWLNLHIPQTTISIMFRVLRGLVLPGWANGRYLGVRYPRDAME
YHLNQQQRIALNYHTGNADPRMFAQHYPRNPSANSAVAAITSPDGRHLASLVDPAVTF
HPWQWAYVPPELADMTVSPWALAFQSLFLWCIRNRQ"

SEQ ID NO 166
PCR primer
CCTATGGGCTCCATGAGC

SEQ ID NO 167
PCR primer
ATCGTCAATCAGGCTGCG

SEQ ID NO 168
PCR primer
ATATTAAACACTCGCCGC

SEQ ID NO 169
PCR primer
ATGAGGGGCCTTTTCGTGTGC

SEQ ID NO 170
PCR primer
CTGAATCCCGCTGCCAAGGCC

SEQ ID NO 171
PCR primer
ATGTTCCCTGTCTGGTTCGTC

SEQ ID NO 172
PCR primer
TTACATCATAGCTATTGCGCG

SEQ ID NO 173
<213> Macaca mulatta rhadinovirus 17577

nucleotides complement(23398..23668)

SEQ ID NO 174
<213> Macaca mulatta rhadinovirus 17577

nucleotides 25065..25368

SEQ ID NO 175
<213> Macaca mulatta rhadinovirus 17577

nucleotides 25518..26525

SEQ ID NO 176
<213> Macaca mulatta rhadinovirus 17577

nucleotides 114979..115383

SEQ ID NO 177
<213> Macaca mulatta rhadinovirus 17577
nucleotides 115385..116413

SEQ ID NO 178
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nucleotides 131731..131926

SEQ ID NO 179
<213> Macaca mulatta rhadinovirus 17577
nucleotides 132333..133719
partial terminal repeat